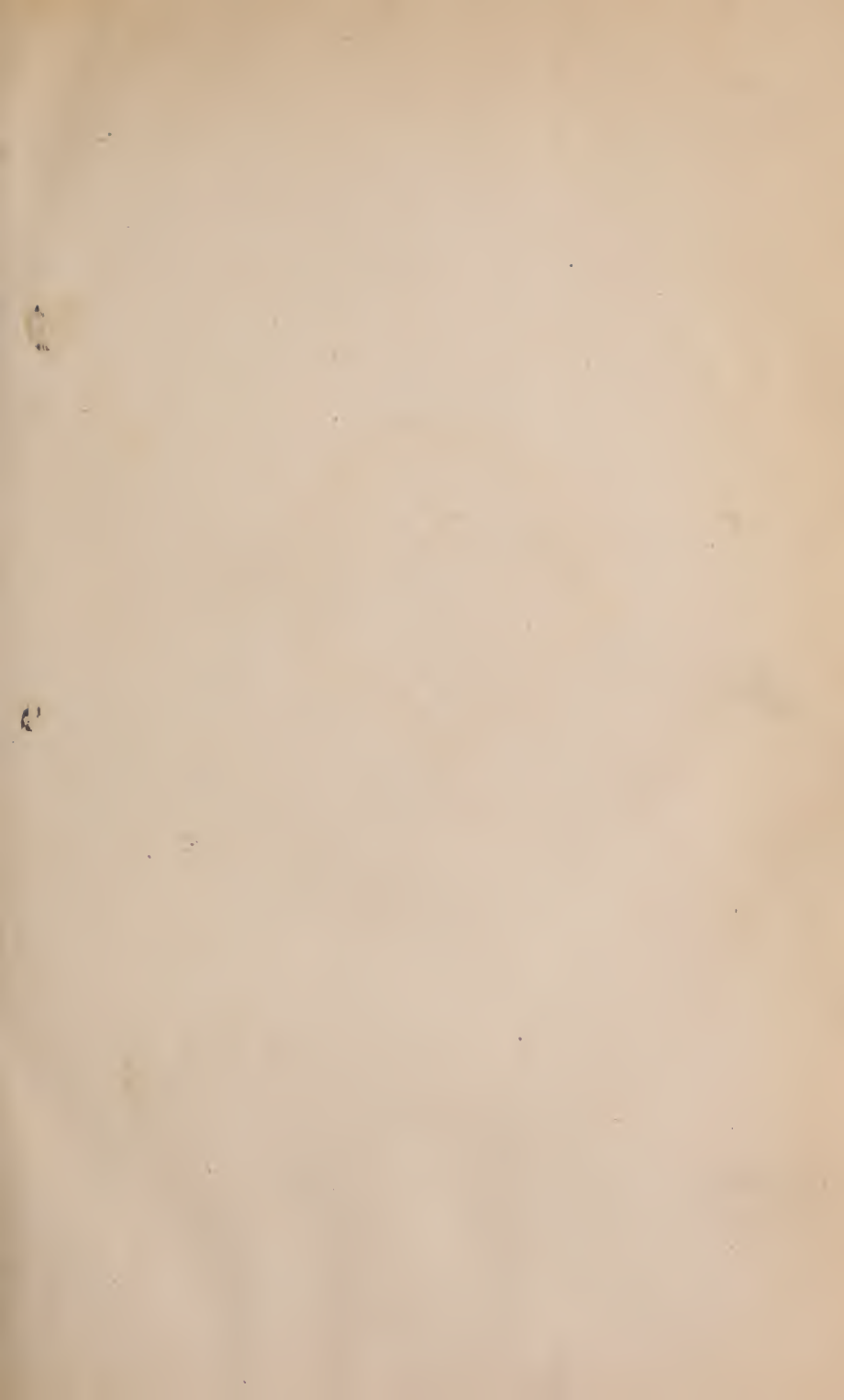


15375



10



THE CINCINNATI

LANCET AND OBSERVER.

J. C. CULBERTSON, M.D., Editor.

New Series: Vol. XVIII. 1875. Whole Vol. XXXV.

CINCINNATI:
PUBLISHED MONTHLY BY J. C. CULBERTSON, M.D.
OFFICE, 281 WEST SEVENTH STREET.

CONTRIBUTORS TO VOL. XXXVI.

T. J. Adamson, M.D.

J. H. Buckner, M.D.

Dougan Clark, M.D.

W. C. Chapman, M.D.

Howard Culbertson, M.D.

A. V. Culbertson.

George Connor, M.D.

N. H. Church, M.D.

Wm. Clendenin, M.D.

C. G. Comegys, M.D.

L. A. Davidson, M.D.

Wm. B. Davis, M.D.

D. A. Dougan, M.D.

A. M. Ellis, M.D.

S. L. Ensminger, M.D.

J. P. Green, M.D.

F. H. Godfrey, M.D.

C. L. Gregory, M.D.

James F. Hibberd, M.D.

C. C. Hildreth, M.D.

H. Illowy, M.D.

C. P. Judkins.

Thos. Kearney, M.D.

A. C. Kemper, M.D.

Chas. P. King, M.D.

J. A. Kimmel, M.D.

Walter Lindley.

Alex. McBride, M.D.

C. S. Muscroft, M.D.

Thos. C. Minor, M.D.

Daniel Milliken, M.D.

Z. C. McElroy, M.D.

James L. Neave, M.D.

C. H. Newcomb, M.D.

J. H. Pooley, M.D.

J. J. Quinn, M.D.

Jno. D. W. Roberts, M.D.

L. Rodgers, M.D.

E. E. Riopel, M.D.

J. N. Robinson, M.D.

Edward Richardson, M.D.

Edward B. Stevens, M.D.

C. Shriver, M.D.

W. R. Sevier, M.D.

Wm. H. Taylor, M.D.

Bernard Tauber, M.D.

J. S. Unzicker, M.D.

N. B. Wells, M.D.

J. T. Wood, M.D.

Jesse Wasson, M.D.

C. A. Warner, M.D.

Thomas Waddle, M.D.

J. D. West, M.D.

(iii)



Digitized by the Internet Archive
in 2014

CONTENTS.

American Agave. By A. N. Ellis, M.D.....	8
Address to the Graduating Class of the Indiana Medical College. By Dougau Clark, M.D.....	217
Annual Address, delivered before the Zanesville Academy of Medicine. By C. C. Hildreth, M.D.....	257
Action and Use of Mercury on the Animal Economy. By Walter Lindley...	264
Aconite Poisoning. By Thos. Waddle, M.D.....	427
Astigmatism. By J. H. Buckner, M.D.....	466
A Supposed Testicle removed from the Vagina of a Hermaphrodite.....	543
Annual Address before the Cincinnati Medical Society. By A. C. Kem- per, M.D.....	705
Conspectus of Forceptry. By Alex. McBride, M.D.....	1
Case of Morphia-Atropia Poisoning. By W. H. Taylor, M.D.....	9
Case of Spina-bifida. By S. L. Eusminger, M.D.....	70
Case of Paraphymosis. By L. A. Davidson, M.D.....	75
Case of Comp. Comminuted Fracture. By W. C. Chapman, M.D.....	147
Cases of Syphilitic Lesion of the Nervous System. By J. P. Green, M.D.	142
Complementary Parts of Disease. By Alex. McBride, M.D.....	193
Case of Comminuted Fracture of Frontal Bone. By J. L. Neave, M.D.....	241
Case of Incised Wound of Radial Artery. By F. H. Godfrey, M.D.....	269
Case of Rape. By C. P. Judkins, M.D.....	271
Case of Hysteria. By J. L. Neave, M.D.....	366
Case of Supposed Rupture. By C. H. Newcomb, M.D.....	370
Case of Fibro-cartilaginous Tumor of the Uterus. By J. Wasson, M.D....	371
Case of Cholera-Infantum. By C. L. Gregory, M.D.....	436
Cholera Infantum. By H. Culbertson, M.D.....	456
Case of Transfusion in Diabetes. By C. Shriver, M.D.....	533
Cholera Infantum. By E. E. Riopel, M.D.....	545
Carbon Oil. By J. D. West, M.D.....	659
Correspondence.....	446, 500, 546, 680
Case of Lithotomy.....	715
Cholera of 1873. By W. R. Sevier, M.D.....	730
Dropsy. By D. Milliken, M.D.....	354
Digitalis as a Remedy. By E. B. Stevens, M.D.....	396
Diuretics. By E. E. Riopel, M.D.....	717
Editorial.....	44, 123, 184, 251, 311, 381, 440, 503, 552, 627, 681
Endometritis. By N. B. Wells, M.D.....	337

Early History of Practical Anatomy. By W. Clendenin, M.D.....	641
Enuresis Nocturna. By J. H. Pooley, M.D.....	720
Gratis Diplomas. By J. A. Kimmel, M.D.....	657
Hospital Reports.....	36, 107
Hemiplegia, treated by large doses of Bromide of Ammonia. By E. E. Riopel, M.D.....	612
Health Department, Cincinnati, O.....	704
Is Revaccination Necessary? By C. P. King, M.D.....	417
Injury to the Head, with supposed fracture of base of the skull. By C. S. Muscroft, M.D.....	420
Labor complicated with a Vaginal Tumor. By T. J. Adamson, M.D.....	268
Lecture on Granulations of the Conjunctiva. By Dr. Sichel.....	577
Mercury as a Supersedent. By Dougan Clark, M.D.....	140
Obituary. S. P. Bonner, 54; P. G. Fore, 319; V. Kersey, 510; J. S. Bailly.....	689
Opium Poisoning. By J. L. Neave, M.D.....	65
Osteo Sarcoma of Superior Maxilla. By C. S. Muscroft, M.D.....	129
Oleate of Mercury in Syphilis. By J. D. W. Roberts, M.D.....	275
On some Points in the Ætiology, Pathology, and Remedial Management of Summer Complaint in Children. By Alex. McBride, M.D.....	449
On the Value of Gelseminum Sempervirens in Facial Neuralgia. By C. Newcomb, M.D.....	531
Paracentesis Thoracis. By J. P. Green, M.D.....	70
Proceedings of Societies.....	19, 95, 152, 244, 284, 497, 660, 743
Puerperal Eclampsia. By N. H. Church, M.D.....	527

REVIEWS—

Clinical Lectures on Diseases of the Urinary Organs, Sir Henry Thompson, 57; A Guide to Practical Examination of Urine, James Tyson, 58; Specific Diagnosis, Seudder, 58; An Account of the Epidemic of Cholera, during the Summer of 1873, in Eighteen Counties in Kentucky, McClellan, 59; Medical Use of Alcohol and Stimulants for Women, James Edmunds, M.D., 59; Infant Diet, Jacobi, 60; Cyclopædia of Practical Medicine, 61; Outlines of the Science and Practice of Medicine, Aitken, 63; Orthopædia, Knight, 64; Fifth Annual Report of the Secretary of State of Michigan, 64; Sketch of the Early History of Anatomy, Keen, 64; Contributions to the Annals of Medical Progress and Medical Education in the United States, Toner, 126; Deploteratology, Besse, 127; Diseases of the Stomach, Fox, 127; Experimentation on Animals, Dalton, 128; A Practical Treatise on the Medical and Surgical Uses of Electricity, Beard and Rockwell, 186; Compendium of Children's Diseases, Steiner, 187; The History of the

REVIEWS—*Continued.*

Reign of the Emperor Charles the Fifth, Prescott, 187; General Paralysis, Morse, 188; Eating for Strength, Holbrook, 189; Dental Pathology, Salter, 189; Treatment of Pleurisy, Carson, 189; Pulmonary Tuberculosis, Dutcher, 190; Disease of the Hip Joint, Sayre, 191; Migrants and Sailors, 191; Transactions of Medical Society of the District of Columbia, 192; Reflex Irritations throughout the Genito-Urinary Tract, Otis, 192; Ziemsen's Cyclopædia, 254; Functional Derangements of the Liver, Murchison, 255; Diseases of the Respiratory Organs, Loomis, 256; Histology and Histo-Chemistry of Man, Frey, 315; Case-Record Book, Walton, 316; Lectures on Physiology, Kuss, 316; Treatment of Nervous Diseases by Electricity, Fieber, 316; Robertson's Charles the Fifth, Vols. 2 and 3, Prescott, 317; The Philadelphia School of Anatomy, Keen, 317; Cerebro-Spinal Meningitis, Baker, 317; Syphilitic Lesions of the Osseous System, Taylor, 447; Sex in Industry, Ames, 448; Bad Health, Reeves, 571; Eczema, Bulkley, 571; Electricity in Medicine, Hutchinson, 571; Circular No. 8, War Department, 572; Mortality from Consumption in Life Insurance Companies, Davis, 572; Ziemsen's Cyclopædia, 573; Biographical and Critical Miscellanies, Prescott, 576; Transactions of the Medical Association of the State of Alabama, 630; Eighth Annual Report of the Board of Health of the City of Cincinnati, 692; Paralysis from Brain Disease, Bastian, 693; Clinical Lectures and Essays, Paget, 694; Transactions of the Ninth Annual Meeting of the Medical Association of the State of Missouri, 695; Manual of Diet in Health and Disease, Chambers, 695; Cholera Epidemic of 1873, in the United States, 696; Ziemsen's Cyclopædia, 699; Transactions of the Philadelphia College of Physicians, 700; On Poisons, Taylor, 701; Trichinosis, Sutton, 701; Annual Report of the Marine Hospital Service of the United States, 701; Vision, its optical defects, 702; Manual of Minor Surgery, Heath, 703; Tinnitus Aurium, Turnbull, 703; Lectures on the Nervous System, Bauduy, 765; A Practical Treatise on Fractures and Dislocations, Hamilton, 766; A Treatise on Human Physiology, Dalton, 766; Transactions of the Medical Society of the State of Pennsylvania, 767; Transactions of the Minnesota State Medical Society, 768.

Reunion of the Alumni Association of Miami Medical College..... 234

Salicylic Acid. By J. S. Unzicker, M.D..... 716

SELECTIONS—

Anointing with Cocoa Butter in Scarlet Fever, 18; Bilot on the Present Phase of the Inflammation Theory, 42; Boldo, 53; Non-impulsiveness of North American Indians, 56; Vinegar Bitters, 106; Etiology of Diabetes Mellitus, 111; New Researches on Diabetes, 113; Independence of the Savage, 114; Formation of Fibrin from the Red Blood Corpuscles, 114; Course of the Fibers in the Posterior Commissure of the Brain, 115; Passage of a Scissors through the Abdominal Walls after being swallowed, 116; Hostetter's Bitters, 117; Researches on the Typhoid Germ, 117; Jaborandi, 119; Treatment of the Diarrhea of Typhoid Fever, 166; Alleged Successful Treatment of Typhoid Fever by Cold, 169; Rupture of the

SELECTIONS—*Continued.*

Perineum, with operation, 172; Illustrations of Heredity, 177; Loss of Smell and Taste, 181; Delirium in Typhoid Fever, 192; Treatment of Acute and Chronic Bronchitis and Asthma, 250; School Hygiene, 250; Tincture of Arnica a Dangerous Application, 278; Camphor Water, 283; Extraordinary Longevity, 301; Wet Sheet in Scarlatina, 303; Localization of the Functions of the Brain, 306; Increase in the Duration of Life, 309; Fissure in Ano treated with Iodoform, 310; Warts, 310; Ergotin in Croupous Pneumonia, 373; A Deadly Spring, 409; How to use the Vaginal Douche, 480; Antidote to Carbolic Acid, 480; Treatment of Chorea by Arsenic in large doses, 502; Extirpation of Parotid Gland, 545; Use of Salicylic Acid, 551; Localization of Functions of the Brain, 563; Cerebral Disturbance in Small-pox, 623; Local Temperature of Paralyzed Parts, 669; Sulphate of Cinchonidia, 670; Histogenesis of Cancer, 673; The Criminal Class, 675; Treatment of Common Cold, 676; Protoplasm, 679; Disinfection of Wards in Bellevue Hospital, 756.

Scarlet Fever. By J. J. Quinn, M.D.....	77
Syphilis. By D. A. Dougan, M.D.....	393
Scarlet Fever. By T. C. Minor, M.D.....	321
Some Suggestions on Transfusion of Blood. By Edward Richardson, M.D.....	653
Strange Case of Death. By E. E. Riopel, M.D.....	656

TRANSLATIONS—

Mechanical Physiology of the Movement of Rotation of the Hand, 17; Tannin in Coryza, 279; Lacteal Engorgements Precursors of Mammary Abscess, 281; Codeine, 282; Chloral, Croton Chloral, 282; Carbolic Acid, 283; Treatment of Spastic Uterine Contraction during the second and third Stages of Labor, 374; Salve for Itch, 558; Compression in the Abdomino-iliac Region as a means for Treatment for Hysterical Attacks, 558; Physiological and Therapeutical Effects of the Monobromide of Camphor, 558; Treatment of Pityriasis Capitis and Acne of the Face, 559; Treatment of Migraine, 561; Gonorrhea, 561; Pityriasis Capitis, 615; Whooping Cough, 615; Saccharine Diabetes, 615; Canceroid of the Eyelids, 616; Eucalyptus Globulus, 617; Chloroform in Lead Colic, 617; Treatment of Cerebral Rheumatism by Hydrate Chloral, 618; Gelsemium Sempervirens, 618; Dysentery, 619.

Treatment of Puerperal Eclampsia. By H. Illowy, M.D.....	201
Therapeutic Reminiscences. By Alex. McBride, M.D.....	461
The Use of Opium. By Geo. Connor, M.D.....	523

Ulcerative Chronic Laryngitis. By Bernard Tauber, M.D.....	611
--	-----

What shall be done with the Habitual Drunkard? By James F. Hibberd, M.D.....	88
--	----

What important part does Alcohol play in the Economy of Man? By C. P. King, M.D.....	513
--	-----

THE CINCINNATI
LANCET AND OBSERVER.

J. C. CULBERTSON, M.D., Editor.

VOL. XVIII.—JANUARY, 1875—No. 1.

Dr Hays
Original Communications.

Art. 1.—Conspectus of Forceptry.

By ALEXANDER McBRIDE, M.D., Berea, O.

[This article is not offered to the profession on account of any thing new it may contain, but as a condensed expression of some of the more important facts of midwifery, and especially "FORCEPTRY," for the instruction of the young and the encouragement of the timid. In short, it is a new method with old matter.]

My apology for introducing a new term, as the above, is that I knew no word in use that would express briefly and fully my meaning. I mean by it the art of using the obstetric forceps, as well as skill in determining when they should be used. Some, who know that I have been engaged, for some time past, in devising forceps, may think that I am seized with anxiety to see them used more frequently. This is not the case; but, on the contrary, it was the bungling kinds of forceps in use, and the large amount of misapprehension as to how, and more particularly when, to use them, that prompted me to the devising of forceps. My design was to provide a forceps that could not do harm ex-

cept by extreme rashness of use; a forceps divested of the qualities of frightfulness, awkwardness, inefficiency, or destructiveness. With such an instrument it will be safe to recommend their more frequent use by all prudent physicians. I say physicians, because *accoucheurs* will do as they please; they will hardly be instructed by me. There has been much said about "meddlesome midwifery," and much with justice; but there is an amount of let-alone policy practiced by many very *prudent* men, which is many times as bad, or even worse, in its consequences than meddling. In fact, many teachers and writers have incumbered their teaching, which is good in the main, with so many cautions, that the student is left in a kind of maze, and hardly knows, if he is a cautious man, whether he is to use forceps at all. The dangers of meddlesome midwifery and excessive caution are nearly equal.

Let us consider a few cases of each kind.

A woman was taken in labor at evening. The pains were regular and sufficiently strong. About midnight the head was engaged in the upper strait. In the morning it had advanced no farther. No bag of waters formed. Counsel was called; he advised delay, because he could *perceive no reason* why the head could not advance. After about twenty-four hours more the head began to advance; and after twelve hours more, a dead fetus was born, followed by a large gush of liquor amnii. All was then clear; labor had been retarded by distention of the uterus by the liquor amnii, and the fetal life was lost by delay and maceration. Five or ten minutes' use of the forceps thirty-six hours before, would have saved much suffering and the life of the child.

A lesser case: A woman had been many hours in severe labor with no advance. A prudent physician came, and, on examining, found an immense expanse of tense membrane and the os nowhere. A slight but firm pressure with the point of the finger, during a pain, caused a large discharge of water, and in five minutes a child was born which might have been born hours previous.

Innumerable similar cases might be adduced; but let these suffice of this kind. Much is said, both in and out of the profession, about nature, waiting for nature, following the teachings of nature, etc. Now, all this sounds plausible; but who knows what nature teaches beyond what we can see? Nature has provided as many means for the destruction of life as for saving and prolonging it; as many means to cause pain and anguish as for the relief of the same. Almost the sole business of life is to devise means of re-

sistance to the destructive tendencies of nature. This may be new doctrine, but consult facts. What is the cause of epidemic puerperal fever? Of cholera? Of puerperal eclampsia? Is it art, or is it nature? What sometimes causes the liquor amnii to remain in the womb behind the body, and cause delay or even disaster; or the fetus to present an arm or other impossible part? Why is spontaneous delivery so much more often impossible with young and healthy primipara than with the feeble and sickly, involving inertia and convulsions? I say these are errors of nature; or, if you will accord intelligence to nature, they must be called evil freaks or designs of nature. There is no more common error than the supposition that the ignorant, rude, and humble, such as much of our foreign population, get along better in child-bearing than the refined and those free from toil and care. I have had no experience with the entirely savage people, but with those above named I have had abundance; and my experience comes to this: that deflections from a safe and natural delivery are vastly more common among them than in the higher ranks. Nature runs riot among the lowly.

These facts and considerations call loudly for the interference of art. It is not in obstetrics alone that, in all matters of design, *art is superior to nature*.

Now, we will give two cases of meddlesome midwifery, and then proceed.

A woman, mother of several children, was taken with spurious labor symptoms; and after detaining the doctor, off and on, for a night, the matter was postponed for two weeks, after which labor began in a similar manner, the os not dilating. After about fifteen hours of such labor a cathartic was given, soon after the operation of which labor became regular, and dilatation was going on finely; but by this time some of the patient's neighbors had taken the matter in hand and brought a more heroic doctor, and the case had to be given over to him. The os was open to near two and a half inches at this stage, the head being high in the upper strait. The doctor said there was no use of spending the night on it, for he could apply the forceps. He called his fellow into the room against the remonstrance of the patient. After much difficulty he got his forceps on the head; but, the lock not joining readily, he called the fellow to hold a candle, and after having the light thus held, and working five to ten minutes, effected the locking of the instrument. He was certainly a man of ability; for he effected the de-

livery after much difficulty and an immense amount of distress to the woman. The child lived after half an hour's handling by me. The woman was very much shattered in her feelings; there was much protrusion of the rectum; but whether she was lacerated or permanently injured I do not know, for I have not heard the particulars of her since.

Now, I know of no remedy for cases of this sort. It resulted from extreme ignorance of the people and unwarrantable rashness of an otherwise accomplished physician—a physician who had enjoyed excellent opportunities. This is an extreme case in part of its aspects; but the come-out of it proved less disastrous than is many times the case with meddlesomeness. To teach the student to be able to pursue the right line of action between forbearance and extreme meddlesomeness is as difficult as to direct the sailor on a right course between Scylla and Charybdis in a storm in a dark night.

Another illustration is the aptness of some to give ergot. Some men have learned that ergot, under some circumstances, will produce uterine contraction; hence they conclude that to expedite labor, all that is necessary is to give ergot. I have recently learned, from reliable sources, of the habit of a reputable physician of giving ergot habitually, at almost any stage of labor, without reference to stage or the dilatability of the parts. Every properly learned man must perceive, on reflection, that still-born children must be a frequent result. If the drug should cause powerful contractions, at a stage of labor before the fetus is ready to be born, the effect will be most certainly disastrous to the child, by means of a continuous pressure, and possibly to the mother also. If the drug fails to produce contractions, and the labor is much delayed, the child suffers with almost as much certainty by the toxic action of the ergot. This practice leads, perhaps, to more frequent disastrous results than instances of rashness such as the foregoing case, although there is an apparent mildness in it.

It is never warrantable to give ergot for the purpose of expulsion unless the head properly presents and the soft parts are well relaxed; and if these conditions obtain, the forceps are applicable and vastly preferable, as being more certain, safe, and expeditious, both for mother and child.

CONDITIONS WARRANTING AND DEMANDING THE FORCEPS.—*Syllabus*.—1. Inertia of uterus, whether action is feeble from the beginning or follows vigorous action.

2. Eclampsia ; in all cases where the head presents.
3. Prolapsus of funis.
4. Unavoidable hemorrhage.
5. Sciatic pains to such an extent as to materially delay expulsion, superinduced by pressure of the head.
6. Rupture or supposed rupture of uterus, the head properly presenting.
7. Cardiac disease dangerous to life.
8. Hernia, especially umbilical or ventral, might necessitate expediting delivery.
9. Malpositions of the head ; though in these cases the vectis may be preferable.
10. Delay in the pelvis from *unknown causes, after dilatation is sufficient, and lapse of time endangers the integrity of the soft parts of the mother or the life of the child.* The causes are liable to be : Large size of fetus ; retention in uterus of liquor amnii ; or twins, or possibly some other cause.*

These are all the causes I can call to mind, which demand the use of the forceps, and the only causes for which their use is justifiable.

The rational supposition is, that in any of these cases either the mother or child, or both, will suffer by longer delay or by pursuing any other means. Not that disaster will inevitably happen, in all these cases, by delay or other means ; but that experience has proved that delivery by forceps is the safer course. Several of these cases might be safely delivered by ergot ; but this is never so safe as the forceps, except in cases where it produces expulsion very quickly. It is always safe, and many times successful, to give quinine in inertia or any case of great debility ; but if it does

*It would be impossible to state all the causes that might arise under proposition 10. I will here give one case: Dr. I. Kneeland, of this town, had spent a long time with a poor woman, the head most of the time in the pelvis. When I arrived he had perforated the vertex, the fetus already being putrid. I proceeded to endeavor to extract, the patient being moribund. With the crotchet I drew away bone after bone, till all but the bones of the face and base were drawn away. I could then grasp the neck with my hand, but the body would not move. About this time patient was dead. On opening the abdomen, the fetal body was found in the peritoneal cavity, with the neck grasped in a rent in the cervix uteri and the tissues contracted around it. I conclude no human wisdom could have diagnosed this case. The forceps, though clearly indicated, could have accomplished nothing. Shortness of the cord might prove a cause.

not produce adequate pains in half an hour, it seldom will at all. About five or six grains is the dose. (The accoucheurs say this will not operate at all, but I know differently.)*

As to time of operation: In some cases we have no choice; in others we have. It is a maxim with some, that both mother and child will be in danger if the head remains in the excavation longer than six hours. This is meant to apply to cases of inertia. I know no reason for waiting six hours after the head properly presents and the parts are well relaxed; premising always that all proper persuasives, including quinine, have been used and failed.

The maxim of proposition 10 is applicable, not only to all cases under that head, but to all under proposition 1.

Under propositions 2, 3, 4, 6, 7, 8, the time to operate is immediately, because the object is to prevent inevitable disaster. We have no choice.

Under propositions 5, 9, and 10 there may be some latitude. "Be sure you are right, then go ahead."

Then, when you begin to meditate the use of forceps, or what you shall do in a case, consider whether your case comes under any of the above heads; and if so, proceed without fear.

How to use Forceps.—First, endeavor to have a proper instrument; one that can be easily and safely applied, and that will fit both head and pelvis.

If a forceps, when closed on the head, with the handles nearly together, will, at the same time, fit the head nicely, from the parietal protuberance to very near the chin, the blades being of due width, the child's head will be safe. If, at the same time, when the blades are on the head, the shanks shall be near the center of the os externum when the head is at upper strait, and the lock so constructed that it can not pinch, the mother will be safe thus far. If your forceps will not bear these relations to mother and fetus, reject them and get a pair that will.

The Operation.—With the long forceps in common use, especially if the head is near, at, or above the superior strait, it is necessary

* I speak confidently of quinine as a remedy to be tried in all case of inertia, before resorting to an operation. I have been in the habit of thus using it for about fifteen years, and have found it vastly preferable to ergot, as being more reliable and entirely safe. In a favorable case, it begins to operate in just twenty minutes (rarely at a later period), and produces pains resembling the best and most regularly intermittent natural pains. About five to six grains is enough.

to place the patient on the back, with hips at the edge of the bed; flex the thighs and legs; part them well, and give each to the care of an assistant. This is commonly done, in fact whether the operation is high or low. (With the "New Forceps," however, a change of position from the dorsal in bed is not necessary, unless the head is very high in or above the upper strait.) Then, the instrument being warmed and oiled, take the left-hand branch in the left hand, guiding its point with the fingers of the right hand, so that its tip shall glide on the left aspect of the cavity of the pelvis till it has passed the head; then depress the handle. Proceed similarly with the right-hand branch, reversing the hands. If you follow, the inner face of the sides of the pelvis with the tips of the blades you can not fail to pass them home. To facilitate this, commence the introduction with the handle so far over or above the groin that the concavity of the anterior portion of the blade shall look toward the head, when it will readily enter. Then carefully seek to adjust the lock, by moving one or the other blades back or forth, this way or that. Next close the blades firmly on the head, and wait for a pain. Make steady but firm traction with each pain, and rest at the intervals. Do not rotate the instrument, nor swing the handles much to the right or left, up or down, except for a good reason. The chief thing to be kept in mind, while extracting, is to so guide the handles that the axis of the pelvic curve of the blades shall follow the axis of the pelvis. If this is done, the head can not fail to move in the right direction. The beginner in forceptry will be surprised to find how far the handles will lean over the pubis; and this is to be carefully encouraged for the safety of the perineum. Above all things, *be not in a hurry*; and when the head presses strongly on the perineum, and the vertex is a little emerged, unless relaxation is great, delay during two or three pains or more, to insure complete relaxation, for at this point it will take place rapidly; and thus avoid that horrid accident, laceration of the perineum. (If the demand for forceps should be imminent, and the perineum rigid at the same time, the abstraction, from the arm, of eight to twelve ounces of blood, will effect relaxation in fifteen to twenty minutes.) As soon as the chin is delivered, throw aside the forceps and proceed as in a simple case.

I have been asked what I mean by a proper presentation of the head. I mean any kind of presentation allowing the application of the forceps. A properly constructed forceps will very rarely

injure any part of the head or face. The instrument used by the renowned Dr. Slop, that smashed Tristram Shandy's nose, was of quite primitive workmanship.

By proper relaxation I mean such amount of relaxation that the blades can be introduced and the head extracted without injury to the mother.

Summary.—The forceps are demanded in any case where the head properly presents, relaxation is sufficient, and longer delay endangers the safety of mother or child. (See proposition 10.)

The kind of instrument—any one which will best accomplish the object without injury to mother or child.

The method of procedure is, to introduce the blades according to their curves and the curves of the pelvis.

The mode of extraction is, to imitate natural action, both as to time, direction, and duration of motion.

These maxims followed, will lead to unvarying success.

If any of my propositions should seem dogmatic, let them remain so till their errors are shown.

Art. 2.—The American Agave.

By A. N. ELLIS, M.D., A. A. Surg. U.S.A., Fort Wallace, Kan.

Through the columns of your journal, I would like to say a few words on the "American agave."

Several years ago, when I was the attending physician to the Southern Apaches, in New Mexico, my attention was first called to its valuable properties as an anti-scorbutic. When the Southern Apaches were removed from Canada-Alamosa, on the Rio Grande, to the Tularosa Valley, in the Mogollon Mountains, the altitude was so great—between seven and eight thousand feet above the level of the sea—and the seasons so short, that but few vegetables were raised. The food of the Indians being almost exclusively meat, an anti-scorbutic was demanded. Much to my surprise, there was not even the slightest appearance of scurvy. Investigation showed that these Indians were making use of the agave Americana, which grows in abundance in that mountain region. It is an evergreen, succulent plant, often growing to a height of fifteen feet, and is found in Texas, New Mexico, Mexico, and Central

America. It bears some resemblance to the genus *aloe*, and hence it is often spoken of as the *American aloe*.

The juice is expressed from the leaves and the root. When fresh it is of a sweetish taste and nauseous odor, and reddens litmus paper. Evaporation converts it into syrup, and fermentation into an intoxicating drink. The Apache seems to be acquainted with the virtues of the plant, more especially those which constrain him to show forth his real disposition. The Mexicans employ it in the treatment of constipation and amenorrhea.

I made use of this remedy in the treatment of a number of soldiers suffering from scurvy with the happiest results. Found it as prompt and efficacious as lime-juice. Gave two or three ounces, twice a day, of the fresh juice. Maceration of the root and leaves produces a soft lather, and is much used in washing clothes, more especially in garments of beautiful and delicate colors likely to fade under the use of common soap. The fibers of the old leaves—those which have been macerated for several days—are used for making thread.

The American agave is indigenous in tropical America, but has been transplanted to Europe, where it is used in making hedges. It is not this plant which produces the intoxicating *pulque*, so much used by the Mexicans, but one of another species, to which it bears many points of resemblance.

Art. 3.—A Case of *Morphia-atropia* Poisoning, with an Inquiry as to the Antagonism of the two Substances in Toxic Doses.

Read before the Cincinnati Medical Society, by WM. H. TAYLOR, M.D.,
December 22, 1874.

September 15th. At 7½ o'clock A. M. saw O'Reilly, a well-developed male child, 3½ months old. He has two lower incisor teeth, and the upper gum is prominent from presence of teeth. From the relatives of the child I learned that it had been healthy and vigorous until a week ago, since which time he has had a slight otorrhea, which, in the opinion of the mother, has caused some fretfulness; also, has had some diarrhea, the stools being large, green, of sour odor, and attended with pain. In consequence

of this trouble, the mother last evening applied to the family physician, who, without seeing the child, prescribed the following:

R Soda. bicarb. } āā
Bismuth. subt. } grs. xij.

Morph. sulph., gr. $\frac{1}{4}$.

Sacch. alb., ʒj.

M. ft. chart. no. iij.

Sig. Dose, a powder once in four hours.

One powder was given at 8 P. M., and a second at 1:20 o'clock this morning.

In a few minutes after the second powder was given, the child began to have noisy breathing, though still sleeping. This the family supposed to indicate *croup*, for which they summoned the physician, who seems to have accepted their diagnosis, and prescribed:

R Zinci. sulph., grs. xx.

Emet. tart., grs. x.

M. Et div. in chart. 4.

Of which he gave *three* in a short time (probably within an hour); also, mustard and salt and water, without any obvious effect, the child continuing to sleep. Perceiving no result, the treatment was changed to that appropriate for poisoning from morphia, which the physician informed them was the true state of the case. The cold-dash, friction, etc., were used, and the following antidote ordered:

R Atrophia sulph., grs. j.

Aqua pura, ʒj. M.

Of which three teaspoonfuls were given in a short time (about 4 A. M.). For the history of the case to this point I accepted the statements of the family, excepting the prescriptions which are copies of the originals.

I saw the child at 7 $\frac{1}{2}$ A. M., at which time its surface was livid and cold; the mouth open; tongue cold, covered with a tenacious, greenish secretion; respiration six per minute, irregular and spasmodic, with spasm of facial muscles; no pulse; pupils excessively large and immobile; conjunctiva dry; no manifestation of common or special sensation. Believing the child to be dying, I so expressed myself, but ordered an enema of ol. terebinth. Finding the power of deglutition not entirely lost, I directed brandy and water and a solution of carbonate of ammonia, grs. x to ʒj, of mucilage acacia, to be given alternately every five minutes, in such quantities as the child could swallow; the whole body to be

enveloped in dry hot flannels. Not wishing to encounter a medico-legal case, as I supposed I should have, alone, I went for H. Ludington, M.D., who kindly aided throughout the case.

In an hour respiration was established; the lividity of the face had nearly disappeared; pulse was perceptible, but very rapid and feeble. After a few minutes of good breathing, respiration would decline in frequency, and lividity would increase; but a deeper inspiration being made, the more rapid respiration would be resumed. At 9½ A. M., however, respiration declined, and, during the effort to place the child in better position, the respiration ceased, and a copious discharge of yellow (mustard?) frothy fluid occurred from the mouth, the skin became excessively pale, and the child seemed dead.

Artificial respiration by the various methods was used for several minutes, till a few gasps, followed by more regular breathing, indicated returning vitality. Desiring to wash out the stomach, two pumps were procured from Drs. Holdt and F. G. Schmidt, but neither had tube sufficiently small. A No. 10 flexible catheter was introduced into the stomach, and, by suction with a syringe, and by elevation of the lower parts of the body, the contents of the stomach were evacuated, and the stomach then thoroughly washed out, by injecting large quantities of warm water, and allowing it to flow out through the catheter. At about this time, a small amount of urine was passed. During the next hour respiration failed repeatedly, to such a degree as to produced marked lividity, but would revive spontaneously or in response to stimuli.

At 11 A. M., the pulse and respiration were regular, the latter 30 per minute; the surface was becoming warm, with perceptible rose tint, and manifestation of slight cutaneous sensibility. Though the conjunctiva was entirely insensible and the pupil immobile, the frequency of administration of stimulants was lessened.

At 1 P. M., the entire cutaneous surface was intensely red and sensitive; tongue and fauces very dry; frequent gagging efforts; feeble attempts at sucking when finger introduced into mouth; slight audible cry. Brandy discontinued.

At 3 P. M., redness of surface continues, with intense hyperæsthesia, so that touching any part causes violent tetanoid movement, especially of the arms; pupil slightly diminished in size, tongue and throat still dry. Child has nursed, and now sucks moist cloth with greatest avidity, manifesting excessive thirst; is very restless and fretful. Discontinued ammon. carb. Gave gr. j

bromide of ammonium every hour till quiet, and spts. nitr. dulco, gtt. xv, every half hour.

At 4 P. M., child sleeps for a few minutes, and then awakens, with spasmodic start and cries; seems to hear. Ophthalmoscopic examination by S. C. Ayres, M.D. Slight reaction of pupil; great congestion of veins of retina; orbicularis palpebrarum contracts.

At 7 P. M., redness of surface less; violent spasmodic action when touched. Temperature $103\frac{4}{5}^{\circ}$; respiration 70. Organs of special sense, except sight, are active. Ordered cold sponging.

At 10 P. M., redness and hyperæsthesia diminishing; child still restless and thirsty. Temperature $104\frac{1}{5}^{\circ}$; respiration 90; pulse 180. Conjunctiva injected. Copious green, sour stool, with white flocculi. Frequent cold sponging. Citrate of potassa, gr. j; carbonated water, \mathfrak{z} j, M., every hour.

September 16, 8 A. M. Slept considerably at intervals; has had five large, green, sour stools, attended with pain; less nervous. Pulse 150; respiration 48; temperature $100\frac{1}{2}^{\circ}$. Pupil more active.

At $1\frac{1}{2}$ P. M., been sleeping good deal; less nervous. Normal temperature. Has nursed several times. Can see remote objects, but not at ordinary distance. On right side of face are numerous distinct, flat, opalescent vesicles, with red basis, from size of pin-head to that of pea.

At 9 P. M., has had numerous sour stools, yellow, with much fluid when passed, but, after exposure to air, become bright green. Child is playful, and seems quite well.

The antagonism of opium and belladonna in their effects on the animal economy was recognized in the sixteenth century, and cases are cited from this early period where one was used to counteract the influence of the other; but only within a short time has the degree and extent of this antagonism been made the subject of careful inquiry.

While in the most obvious manifestation of their effects—the action upon the iris—there are unquestionably opposite conditions produced, yet we are not justified therefrom in concluding that the one will counteract or nullify the power of a previously administered dose of the other; neither are we authorized to conclude that, because they are antagonistic in their effects upon one organ of the body, they have correspondingly diverse effects upon *other* organs. The recognition of the truth of this proposition has rendered more difficult the solution of the question of their relation in poisonous doses, where many functions are necessarily involved. As is

usually the case, investigators have resorted to experiments upon inferior animals to determine this relation.

Ignatius Jacob Konig, in an inaugural dissertation, based on a series of experiments on rabbits, with special reference to circulation and respiration, starting with the proposition, that "because a *small* dose of the one may be counteracted by the other, it is not proven that the effects of a fatal dose will also be rendered harmless," he began to experiment with *fatal doses*, and his conclusion was that morphia *can not* be regarded as antidotal to fatal doses of atropia.—*Schmidt's Jahrbuch*, No. 149.

Bois (*Gaz des Hop.* 1865) reports the result of experiments, from which he concluded that the alkaloids were not antagonistic if given simultaneously; but, on the contrary, the symptoms were more violent than when given independently. He believes the asserted antagonism is explicable by the fact that *pure* alkaloids are not given, and the antagonism is due to the elements with which they are associated.

Béhier substantiates the last conclusion, by narrating a case of morphia poisoning, where the injection of atropia was followed by symptoms of high degree of atropia poisoning.

We think more extended research does not sustain this view.

The next extended researches on animals are reported by Dr. John Harley, "Old Neurotics," the result of twenty-one cases of opium poisoning in dogs, treated by belladonna, from which he made the following deductions:

1. The evidence of antagonism in any given case is inconclusive.

2. Taken individually or collectively, the cases show that belladonna has no influence whatever in accelerating the recovery from the poisonous effects of opium.

3. The somnolence stupor, narcotism and coma, the essential effects of the action of opium, are both intensified and prolonged by the concurrent action of belladonna.

4. Belladonna is powerless to obviate the chief danger in poisoning from opium, viz., the depression of the respiratory functions.

5. The results of the combined action of opium and belladonna are the same, whether given in medicinal or toxic doses.

Another practical proposition of this observer I reserve for future mention.

John Hughes Bennett, as chairman of the committee of the British Medical Association to investigate the antagonism of poisons, has

just made a report on the relation of the substances now under consideration. *British Medical Journal*, October and November, 1874.

The experiments were made upon rabbits and dogs with *fatal* doses. The conclusions arrived at are thus stated :

1. Sulphate atropia is, physiologically, antagonistic to meconate of morphia within a limited area.

2. Meconate of morphia does not act beneficially after a large dose of sulphate atropia ; for, in these cases, the tendency to death is *greater* than if a large dose of either substance had been given alone.

3. Meconate of morphia is not specifically antagonistic to the action of sulphate of atropia on the vaso-inhibitory nerves of the heart.

4. The beneficial action of sulphate of atropia, after administration of large doses of meconate of morphia, is probably due to the action sulphate atropia exercises on the blood-vessels. It causes contraction of these, and thus reduces the risk of death from cerebral or spinal congestion, as is known to occur after introduction of fatal doses of meconate of morphia. It may also assist, up to a certain point, not precisely fixed in these experiments, by stimulating the action of the heart through the sympathetic, and obviating the tendency to death from deficient respiration, observed after large doses of morphia.

One other proposition I shall omit for the present.

While the conclusions of these investigators are doubtless fully warranted, yet the widely different effects of therapeutical substances on inferior animals and man make it at least desirable that they should be substantiated, as far as possible, by observation of the effects of the remedies on human beings.

An opportunity, unique in its adaptation, for testing the question in man, was offered Drs. Mitchell, Keen, and Morehouse, in the hospital for nervous diseases under their supervision, during the recent war. The results of their observations (*Am. J. M. S.* 1865), as far as we are concerned at present, are embodied in the following propositions :

1. As regards the circulation, they do not counteract each other.

2. As regards the eye, the agents in question are mutually antagonistic ; but atropine continues to act much longer than morphine.

The cerebral symptoms caused by either drug are, to a great extent, capable of being overcome by the other ; but owing to the different rates at which they move to affect the system, it is not easy

to obtain a perfect balance of effects, and this is the more difficult from the fact already mentioned, that atropia has the greatest duration of toxic activity, and as regards toxic effect on the cerebral organs, the two agents are mutually antidotal, but this antagonism does not prevail throughout the whole range of their influence, so that in some respects they do not counteract one another.

Important as are these results, and peculiarly valuable because the expression of the action on man, they are yet insufficient for our purpose, because not the result of the action of *violently toxic doses*.

To supply this deficiency, and to seek to determine the mooted point, from actual clinical experience, I have collated a number of cases of poisoning by the agents under consideration, as reported in the medical periodicals the past fifteen years. Of the cases thus reported, many are valueless for any deductions, because deficient in the necessary data as to dose, effect, period of administration of antidote, etc. Such cases I have been obliged to ignore. To avoid repetition and prolixity, let me premise that all cases herewith submitted, unless otherwise stated, presented the characteristic symptoms to a dangerous degree.

I shall not weary you with details of all these cases, but simply offer some general deductions.

Among the cases, Dr. Chambers reports a child four years old, who took one-half grain sulph. atropia; an hour or two afterward was uncertain in her walk, pupil widely dilated; an emetic and warm bath were given, and child recovered.

Dr. Foster (*Med. T. and G.* 1859), mentions a child who took 70 grs. ext. belladonna daily, or a total of more than ̄ij in twenty-six days, and a child fourteen years old, who took 37 grs. of sulph. atropia in eighteen days.

From such examples we can corroborate the very important proposition of Harley, that children are remarkably insusceptible to the effects of belladonna, sometimes bearing very large doses before cerebral symptoms develop.

Among the earliest collections of cases is that of Dr. W. Norris (*Am. J. M. S.*, October, 1862), of nine cases of opium poisoning treated with belladonna, two of which died, and eighteen cases of belladonna poisoning treated with opium, only one of which was fatal. Some of these, however, were such small doses—*e. g.* atropia $\frac{1}{30}$ gr., that they probably would have recovered without special treatment. One point of much interest in these cases is that in all but

one, the period at which the opium was used, was remote—i. e. from five to twenty-eight hours from taking the poison ; and herein I believe is a point of much importance, viz., that the late administration of the antidote furnishes a stimulant at the time the depression from the poison is most profound, consequently it re-enforces the vital powers at the time of greatest need.

Again, an examination of the *quantity* of the antidote shows that in many cases it was very small in *proportion* to the amount of poison taken, and often that it was *actually* a small dose of the remedy. Now, the fact is fully recognized that *small* doses of opium are *stimulant* ; and herein we have an index of the kind of dose to be used as antidotal, and are not guided so much by the quantity of the poison.

While these points are sustained by an analysis of the cases, yet the results of treatment of belladonna poisoning by opium are but little more satisfactory than by other means, for we find of thirty-nine cases treated with opium, five died ; of six cases treated by other means, none died. We must then admit, at least, a doubtful verdict. Permit me to cite the following views to guide in the emergencies of practical life :

J. H. Bennett says : " In man, sulph. atropia would be too dangerous and uncertain a remedy to depend on in cases of poisoning by opium or any of its salts ; but where the action of the heart is greatly diminished, it is directly indicated."

Harley says : " While, then, belladonna can not, in any sense, be regarded as an antidote against opium, but in *large doses* exactly the reverse, it may, under certain conditions, always in *very small doses*, be used in conjunction with other remedies as a means of aiding the recovery."

And Prof. Reese, of Philadelphia (*A. J. M. S.*, April, 1871,) says : " Taking a fair and honest view of all the cases I have been able to collect together, as well as of those which have fallen under my own personal observation, I feel constrained to admit that the weight of evidence is in favor of such antidotal or antagonistic power in the human subject. . . . I should consider myself very culpable if, in case of poisoning, either by opium or belladonna, I should neglect to employ the alternate drug with a view to its antidotal power."

Translations.

Dr. O. Lecomte, France, in an essay upon the "Mechanical Physiology of the Movement of Rotation of the Hand," published in the August number of the *Arch. Gen. de Med.*, 1874, concludes as follows :

"1. That man possesses a movement of *rotation* (at the wrist), not generally understood. . . .

"2. This movement (of rotation) is not unique ; it is not effected constantly about a single axis. We admit a principal mode of rotation—the more habitual, it may be—about an axis directly in the line of the third metacarpus and the median finger ; but this axis may be displaced within or without the median line, and pass through any of the fingers, or through each of the interosseous or inter-digital spaces, and thus produce so many modes of secondary rotation.

"3. Direct observation and experiment confirm these propositions, through the unexceptionable testimony of sight and touch, and without any illusion of the senses which can be invoked.

"4. Rotation of the human hand, in its various forms, is accomplished by simultaneous movement, harmonious and similar, in the region of the wrist, of the radius and ulna.

"5. Each of these bones describe a movement, the nature and amplitude of which varies, according to the mode of rotation and as the axis of rotation is displaced outward or inward, but in all cases *the two bones each move*.

"6. The movement of pronation and supination, as it is usually understood, of the radius only revolving upon the immovable ulna, is not a voluntary physiological movement. Muscular contraction can only be produced in the living. An experiment well known, which we have often made, determines it upon the cadaver ; but which is only a passive movement, communicated, anti-physiological, without any muscular action.

"7. We have demonstrated that the working of the articulations is very complex in the rotation movement of the hand, and that the movement involves the co-operation of all the joints of the forearm. At the elbow, the humero-ulnar articulation plays an

important part. The ulna is caused to execute, upon the humeral trochlea, a movement of "*spiroïd*" torsion, which varies in extent, but which exists in the various forms of rotation (cited)."

[At the wrist, it seems to us, there is a movement altogether special. The surfaces of the inferior radio-ulnar articulation glide in an inverse manner, the one upon the other, in a mode always exactly corresponding; *i. e.*, in the act of pronation the radius moves (the hand being semi-pronated) down, while the ulna moves upward.—C.]

"8. The system of rotators of the hand include four muscles: two for the radius; two for the ulna. There is a radial pronator (the pronator radii); a supinator radial (the supinator brevis) [the author does not consider the supinator longus as a supinator, but regards it as a flexor of the forearm—C.]; an ulnar pronator (the anconeus); and an ulnar supinator (the pronator quadratus)."

[The mode adopted by the writer, in his experiments to determine the nature of the movements of the wrist, was to inclose the wrist in a round metallic ring of sufficient diameter to include the wrist. This ring being placed over the styloid processes of the ulna and radius, as these processes moved within the ring the relative motion of the two bones could be detected by observing given points on the ring.—C.]

Anointing with Cocoa Butter in Scarlet Fever.—Upon the recommendation of Schneeman, the anointing of the body with fat has been extensively practiced in Germany during the last ten years, with the view of lowering the temperature and hastening desquamation. Dr. Bayles suggests, in this connection, the employment of cocoa butter, as producing a more cooling and refreshing effect upon the patient, and emitting a more agreeable odor in the sick chamber. This agent, on account of its solid consistence, is more readily applied than either fat or oil, and is more easily absorbed by the skin. Furthermore, it is thought to afford the system a certain amount of nourishment.

In severe fevers, the entire surface of the body should be rubbed with this substance every hour, or at least once every four hours. Its application is also recommended in typhoid fever, in cases where the patients manifest a dread of water, or where the application of water is impossible; likewise in other inflammatory diseases, especially the severer forms of inflammatory rheumatism and in tuberculosis.—*Giornale Veneto di scienze Med.*, ser. 3, tom xxi, 1874.—*Allg. Med. Central-Zeitung*, September 16, 1874.—*Boston Medical and Surgical Journal*.

Proceedings of Societies.

CINCINNATI MEDICAL SOCIETY.

Dr. Murphy reported the following case of obscure irritability of stomach, with obstinate vomiting: John Murphy, aged 73; born in Virginia; laborer by occupation; consulted Dr. Murphy, March 5, 1874, complaining of the loss of appetite, constipation, and weakness. Tongue covered with a thick yellowish-brown fur; no fever; pulse weak. The speaker had known patient for thirty years; had treated him for cholera in 1849. With this exception his health had been good. He was strictly temperate and industrious, and never had any form of venereal disease. A gentle purgative of mass. hyd. and comp. ext. colocynth was given.

In three days he returned, feeling better, but anorexia and weakness continued. Tr. cinch. comp. was given as a tonic. A week later the doctor was called to see the patient, who was complaining of nausea and vomiting; said he had vomited everything he ate or drank except some dry toasted bread.

Examination of epigastric and hypochondriac regions revealed no signs of organic change in the viscera of those regions. Lime-water and milk were directed, which were tolerably well retained; portions, however, were vomited daily. The matter ejected consisted largely of green and yellow bile.

Various remedies were given, from time to time, to quiet his stomach; but even small pieces of ice or small quantities of ice-water excited vomiting.

During the last four weeks of his life he could only retain a small piece of toasted bread and a teaspoonful of water twice a day, and he was only made comfortable by the administration of small and repeated doses of morphia. At no time could he bear stimulants. The tongue became dry, red, and glazed; emaciation progressed rapidly. For three weeks before his death, vertigo during the day, and delirium during the night, troubled him greatly. There was no fever at any time. The most careful examination, at different times, failed to reveal any signs of organic lesion.

A marked feature of the case was the enormous quantity of bile ejected from the stomach daily for three months. The patient died June 2, 1874.

Autopsy twenty-one hours after death by Dr. Mackenzie. Very great emaciation; stomach and intestines perfectly normal; liver and spleen presented a healthy appearance. Projecting from anterior surface of the right kidney was a tumor, almost globular in shape, about two and a half inches in diameter. The surface of tumor was quite smooth and very vascular. Upon making a section through it, it was found to consist of a fibrous capsule inclosing a brown semi-solid substance. The capsule of the tumor was about one-sixteenth of an inch in thickness, and so intimately connected with the capsule of the kidney that they could not be dissected apart. The cortical substance of the kidney had been absorbed to a considerable extent, but not completely, for a space corresponding to the attachment of the tumor with the kidney. The absorption seemed due entirely to pressure, as the structure was quite normal. The surrounding organs did not appear to be materially affected, as far as their anatomical relations were concerned, by the presence of the tumor. The brown substance constituting the principal portion of the tumor was found, under the microscope, to consist of oil globules, granular matter, and cholesterine crystals.

Dr. Murphy said he had been puzzled to account for the obstinate vomiting. He had suspected ulceration of the stomach, and cancer, but neither existed; had also thought it might be due to a tumor, which, by pressing upon the gall-bladder, might cause the bile to be forced into the stomach.

Dr. Mackenzie thought the vomiting was caused by reflex action from pressure on a branch of sympathetic.

Dr. Williams suggested that there might have been some cerebral lesion.

Dr. Murphy said there were signs of organic brain disease. The delirium, during the last three weeks of the patient's life, he thought was due to cerebral anæmia.

Dr. Comegys dissented from this view. Believed delirium due to undue quantity of blood in cerebral capillaries from atony.

Dr. Dandridge directed attention to the striking contrast between this case and the one reported by him on the 7th inst. In his case, there was serious gastric disease without any gastric symptoms; in this case, there was great gastric disturbance without any gastric

lesion. Speaker also referred to a case in which there was regurgitation of food from pressure of an aneurism on the œsophagus.

Dr. Murphy gave a short account of a case of aphasia, sudden in its accession, in a female who had had cerebro-spinal meningitis, after which she suffered from almost constant pain in the back, loins, and limbs, and occasional pain in the head, but immediately preceding the attack of aphasia was in apparently good health. There was no insanity, no paralysis of motion; could write or use the mute language. *Dr. Murphy* thought the aphasia due, in this case, to cerebral anæmia. He promised a more detailed account of the case at a future meeting.

Dr. Comegys made some remarks on the use of quinine in large doses, and cited some cases of its use.

A week before, had been called to see a girl, 12 years of age, who had scarlet fever. There was superficial ulceration of tonsils. Temperature 103°. Pulse —. There was no particularly alarming symptoms. The next morning the symptoms were more alarming. Pulse 160, feeble; capillary circulation feeble, face purple, pupils dilated, tonsils sloughing. Gave twenty grains of quinine at once, as an antiseptic and tonic. Gave whisky freely. The patient improved rapidly.

Case 2. A girl, 18 years old; in a typhoid condition. Temperature 104°. Pulse 120. Respiration hurried, mind wandering, cheeks flushed, bowels loose. Had been taking quinine in two-grain doses for a week. On Friday morning he gave one scruple of quinine at a dose. Saturday morning, the date of this report, she appeared much better; temperature 101°, pulse 108, respirations 26. Saturday evening, favorable condition continued. Gave ten grains quinine. Had no medicine since the twenty-grain dose of Friday.

Case 3. To a negro boy in the hospital, with typhoid symptoms, he gave a twenty-grain dose of quinine. The next morning his temperature had subsided, and he seemed in every respect better.

Case 4. A female in the hospital, in similar condition, had the same treatment with like beneficial result.

He thought that in cases similar to the above, and particularly in malignant scarlet fever, saturation of the blood with quinine, for its antiseptic properties, is justified.

Dr. Comegys gave notice that at the next meeting he would give some instances of the use of bichloride of mercury.

The Society then adjourned.

The Society met in the lecture-room of the First Congregational Church, corner of Eighth and Plum streets, November 21, 1874, the president, Dr. A. C. Kemper, in the chair.

Dr. Comegys remarked that he had been for some time past making a very satisfactory use of bichloride of mercury in a somewhat wider range than ordinary, and gave several examples.

In an obstinate case of *crusta lactea*, he at last resorted to its use in very small doses, dissolved in comp. syr. sarsaparilla. The amendment was rapid and complete.

In the case of a child three years old, with chronic ulceration of descending colon following acute dysentery, and which was extremely obstinate, he, after employing very varied treatment for nearly two months, without success, gave the bichloride, under which a complete cure was effected. This patient continued well, gained flesh and blood, but subsequently, from exposure, became ill in the same way. It is now improving under the same treatment.

In both of these cases the strumous diathesis existed.

In a male adult who has been subject, for several years past, to attacks of dysentery, and which had nearly always assumed the chronic form, with ulceration of the rectum, he had found a rapid amendment in the last attack under the use of the remedy.

In a case of chronic ulceration of the rectum, now under his treatment in the Cincinnati Hospital, in which the patient has had as many as twenty-five stools a day, a great improvement has been manifest under the use of the bichloride.

In a case of very obstinate chronic bronchitis, there has been a marked amelioration in the patient since he has been under this remedy.

In the case of a lady of lymphatico-sanguino-nervous temperament, who, from an injury of the leg and ankle, has had a most intractable state of ulceration, and upon which he had employed everything, he thinks, but skin-grafting, a cure was rapidly established by the use of $\frac{1}{24}$ gr., three times a day.

There was no syphilitic taint in any of these cases. From these and other cases of obstinate ulcerations in which he has had satisfactory results, he felt inclined to urge its use upon the members of the Society. He believes it would be an effectual agent for the relief of chronic inflammations of the internal uterus.

As to the *modus medendi* he has nothing else to suggest than the proposition of Trousseau—the action of “substitution”—a medicinal action substituting itself for the morbid one existing,

with a tendency to spontaneous cure. Under this theory, care should be taken not to apply the remedy in too large doses, or for a very long time. We know very well that in superficial ulceration, as of the nasal passages or the eyelids, mild mercurial ointments are among the best applications, but if too strong, they augment the ulceration rather than subdue it; *e. g.*, the citrine ointment, if used, should be diluted to one-fourth its officinal strength.

The feeble actions of a suffering part are in this way greatly stimulated, but not overwhelmed, as by a stronger dose. The small but repeated doses of the bichloride are absorbed and enter the circulation, by which they are carried to all the tissues, but make no marked impression, perhaps, except upon the points where disease exists; there, the healthy actions are excited again, and restoration takes place. We see the same effects in the use of remedies for disease of the mucous membranes of the urinary passages. The balsam or vegetable essential oil, after absorption by the blood-vessels, are eliminated by the kidneys, mingle with the urine, and excite healthy action on the diseased mucous surfaces, as they pass over them.

Dr. Judkins said he had used the bichloride locally and internally for specific disease. He thought for internal use in secondary syphilis, the protiodid was better, as it operated more quickly. As a local application to some forms of syphilo-dermata he preferred the mercurial soap (hydrargyrum ammon., ʒj; linimentum saponis camph. ʒj) to any other mercurial. He had never succeeded in removing syphilitic stains so quickly with any other remedy.

Dr. Mackenzie thought *Dr. Judkins'* success was due to the fact that the mercury in the soap remained in contact with the diseased part.

Dr. Kearney thought the quantity of mercury in the soap too small to be very effective.

Dr. Murphy thought the bichloride a valuable remedy. It is an alterant, acting upon all the secretions, and has a wonderful influence, especially in chronic cases. In these cases it improves the appetite. It is a valuable remedy in scrofula. Thought due allowance should be made in the cases reported by *Dr. Comegys* for the benefit of preceding treatment, and the natural tendency to recover.

Dr. Carson, in some remarks on the prevailing diarrhea, suggested that it might be owing to the condition of the water.

Dr. Murphy made some remarks on tubular respiration and bronchophony as symptoms in pleuritis and pleuritic effusion.

Dr. Carson thought the physical signs not correctly stated in some of the text-books. There is great difficulty at times in diagnosing between pneumonia and pleuritis with effusion.

Dr. Comegys thought the mistake of pneumonia for pleuritis quite common.

On motion of *Dr. Comegys*, the president of the Society was requested to confer with the health officer in regard to the prevailing diarrheal disease.

The following papers were announced: *Dr. Carson*, on fever in phthisis, and its treatment, at the third meeting in December; *Dr. C. P. Judkins*, on mercury in syphilis, the first meeting in December; *Dr. Murphy*, at the next meeting, on a method of stamping out scarlet fever, and *Dr. Holdt*, at the same meeting, a paper on diabetes mellitus.

The Society met in regular session November 23, 1874, the president, *Dr. Kemper*, in the chair.

Dr. Kemper reported that in accordance with the wishes of the Society, he had conferred with the health officer in regard to the prevailing diarrhea, and said that officer would make a report to the Society.

Dr. Quinn said that the health office was only an index of mortality in the city, not of prevailing diseases. An approximate idea might be formed of the prevalence of diseases among the poorer classes from the weekly reports of the district physicians. These reports showed that bowel diseases were not as prevalent among the poorer classes as he believed them to be among the better classes.

The number of deaths during the last week from all bowel diseases was 13; for the month, 54. Ninety-nine new cases of this class of diseases had been reported during the week by district physicians. These cases were scattered, occurring in all parts of the city. He thought that from the fact that diarrhea was not as prevalent among the lower classes, who generally use water direct from hydrants, without filtering or other purification, and from the fact that diarrhea is prevalent in parts of the city not supplied by the water-works, that the great prevalence of the disease could not be attributed to the water from the city water-works.

Dr. Comegys said that more than one-half of the patients recently

treated by him had bowel diseases. These diseases were generally ushered in by chill, followed by fever, continuing from two to ten days. There was generally headache, backache, thirst, white tongue, anorexia, vomiting, tenderness and pain in the bowels; in some cases, "diarrhea of a serous or mucous character; in others, dysentery, with tormina and tenesmus. The fever was mostly of an ephemeral character.

Dr. Quinn remarked that the disease either was not as prevalent or not as fatal this month as last.

Dr. Mussey thought the disease traceable in many cases to errors in diet.

Dr. Murphy thought the symptoms mentioned by *Dr. Comegys* indicative of febricula. He thought there was something in the atmosphere, food, or water which caused the present disposition to bowel troubles. He had found these cases generally yielded under bismuth and opium and a liquid diet.

Dr. Epstein thought there was a tendency to diseases of all the mucous membranes. He reported two cases, in one of which, that of a child, diarrhea supervened upon the subsidence of an attack of diphtheria, and in the other, that of an adult, diarrhea followed an attack of bronchitis. These cases improved under bismuth and opium.

Dr. Murphy inquired of the health officer as to the relative proportion of births and deaths.

Dr. Quinn said he was not able to state correctly the proportion, owing to the fact that it had been impossible to get full returns from physicians and midwives. Although reports of births had been made to the health office but five months, there had already been two or three hundred more births reported to that office than were reported to the probate court during the year preceding. He thinks the proportion of births to deaths has increased.

Dr. Quinn made some remarks upon small-pox, which is prevailing extensively in some cities and to some extent in this city. He thought the young children of this city were less protected than at any time for several years. As the disease has not prevailed for some time, persons have been thrown off their guard, and reliable vaccine virus has become scarce. He had made some effort to get a supply, but thus far had only been able to obtain a little of the primary virus, which had been used by some physicians satisfactorily.

Dr. Mussey reported the following case of "shot-gun" wound:

E. L., aged 15, from the accidental discharge of a gun, received a wound of scalp and head, on the left side of the median line, from the brow upward about five inches.

The accident occurred on the morning of November 8. Dr. M. saw the case at $3\frac{1}{2}$ p. m. the same day, in consultation with Dr. King, and found that several of the shots had penetrated the cranium. An incision was made in the scalp, and some shots removed from depressions in the external table. Between two perforations into the cranium, an inch and a quarter apart, he chiseled out the bone to the width of half an inch. One shot and half of another were removed from this opening, also a piece of the internal table irregular in shape, about half an inch in diameter. When this was removed, a quantity of blackish, partially coagulated blood escaped from the outer end of the fissure. At the inner end, brain substance was observable. There were other perforations of the skull, but the opening made was deemed sufficient for the purpose of drainage. The patient had at no time been unconscious. Before the operation his pulse was sixty, irregular, but not intermittent; every third or fourth beat was feeble, and quickly followed the preceding beat. After the operation, pulse was sixty-five, and for twenty-four hours varied from fifty-eight to seventy—the irregularity mentioned above continuing. For the three succeeding days the pulse was from seventy to seventy-five, being highest at about 8 p. m. No chilliness or excessive warmth.

The morning after the receipt of injury, 5 grs. calomel and 15 grs. rhubarb were given in two doses at intervals of two hours, the last dose followed by a Seidlitz powder, which produced a free evacuation, after which the irregularities of the pulse ceased.

At 8 p. m. on the 12th, the pulse was eighty; no other unusual symptoms. At $11\frac{1}{2}$ a. m. on the 13th, Dr. M. was summoned to see the boy, whom he found much prostrated, trembling, and complaining of blindness, which came on suddenly, and pain in back of the neck. Pulse, 100; respirations, 40.

The wound was opened, and some pus pressed out from between the scalp and cranium. Protruding from the opening of the skull was a vascular tumor, which, on being pinched with the forceps, bled profusely. The bleeding was provoked and kept up about half an hour.

Soon after the doctor entered the room, the patient became unconscious; breathing was more frequent; pulse more rapid, rising as high as one hundred and forty per minute; the right hand

and side became hot, the left side cold, the fingers of left hand closely shut, and the arm paralyzed. Patient died at 2 p. m. No autopsy.

Dr. Mussey also reported a case of syphilis, communicated by a child nursing its mother after having nursed a woman who had the disease. The nipple became sore, so much so that the mother had to discontinue nursing the child. In six weeks she broke out with secondary manifestations. The husband was perfectly well, and there seemed to be no doubt as to the source of the disease. The child had characteristic spots, but not until it was eight months old.

Dr. Murphy mentioned a case similar in character.

Dr. Judkins said that secondary syphilis was not communicable except by mucous patches. He thought the furaceous eruptions harmless; thought the child had contracted the disease from the nurse by chancre, and inoculated the mother by a primary sore on the nipple, secondary manifestations following in each case. He had seen a case in which there was an indurated sore on the nipple with affection of the axillary glands, followed in a few weeks by secondary symptoms.

Dr. Mussey thought any syphilitic eruption having a particle of fluid secretion or exudation capable of communicating secondary syphilis.

Dr. Murphy disagreed with *Dr. Judkins* as to the communicability of secondary manifestations only by mucous patches. He believed the squamous and eczematous eruptions communicable.

Dr. Dandridge referred to the possibility of transmission by the blood, and the blood of a syphilitic person would contaminate the blood of another.

The Society then adjourned.

The Society met in regular session, December 1, 1874, the president, *Dr. Kemper*, in the chair.

Dr. C. P. Judkins read the following paper on the administration of mercury in syphilis:

"That mercury in some form is the most reliable remedy at our command, for the treatment of specific diseases, in their earlier stages, is a generally accepted belief, but in what quantity, or to what extent it should be used, there is a great diversity of opinion.

"It has occurred to me (and I think personal experience and the

later authorities will bear me out in the statement) that the chief object in the management of these cases is to *know the patient*; that is to say, to acquire such knowledge of the personal habits, hereditary disposition, previous attacks of this and other diseases, occupation and hygienic surroundings, that we may arrive at some conclusion, not as to whether mercury is essential, but as to how much, if any, it will be necessary to give.

“That the hereditary diathesis and temperament of the patient is all-important in the management of the case, is as true in this as in other diseases. It is an entirely different thing to carry to a successful termination cases of this disease where the patient, either through his own evil courses or that of his parents, has so destroyed the ‘*vis medicatrix naturæ*’ that is the chief adjuvant in the eradication of this poison, that when he presents himself to you with a well-marked attack of constitutional infection, you have not only to deal with the immediate disease, but over and beyond all that, a diathesis bad at the beginning and made greatly worse by long-continued and personal dissipation. I say it is a different thing to treat such a case, from one where no hereditary taint, no vicious habit exists—nothing but the present disease to contend with. Mercury, in the former case, takes a secondary place; whilst in the latter, it alone, and in small quantities, is sufficient for the management of the disease.

“If it is true that syphilis is one of the exanthemata, having, like them, a definite course to run—longer or shorter in each case it may be—I would ask what medicine can be administered that can abridge its duration one day? And if this be true, and I think it is, are we not doing the patient great harm and actually aggravating the disease by the administration of large doses of any so-called specific remedy? I know it is claimed by the best authority, and personal experience proves such to be the case, that by the early administration of mercury—before the appearance of secondary symptoms—we can delay the appearance of those symptoms; but it is only a delay, for come they will, in spite of any means that may be instituted—modified in form, but still they exist, and prove by their existence that the poison remains in the system for a longer period, may it not be, than if mercury had not been given.

“Again, if syphilis is an exanthem, why treat differently from what we do other diseases of the same class? What sane phy-

sician attempts to prevent the appearance of the eruption in scarlet fever, measles or small-pox? Who would think for a moment of the administration of any medicine, or the using of any means that would drive back those cutaneous manifestations of these diseases that are so grateful to his eyes? Then why, when we are called upon to treat this disease, the evolutions of which are the same as others of the same class—viz., inception, constitutional manifestation, and gradual decline—should we pursue a course directly opposite in its tendencies and effects? What difference is there in the nosological scale between the evolutions of syphilis and variola? Does not the chancre in one correspond to the pain in the back, headache, malaise, etc., in the other? The period of latency of the poison and the external manifestations exist in both. Then, why should the treatment of one be supporting in its tendency, depending on nature and time for the cure of the disease; in the other, depressing, strong medication, and complete ignoring of the natural course of this affection? Such being the case, is the administration of mercury, as it is given at present, good treatment? How much more rational would it be to direct the use of medicines to the building up of the constitution, thereby enabling it to throw off this poison, the same as we do in other exanthemata. These are vital questions, and I hope the day is not far off when the physician will so direct his treatment that the system of the patient may not be placed, as it is now, in a more favorable condition for the ravages of the disease; but by discarding all agencies depressing in their tendency, we may assist nature in ridding the system of the poison, the same as we do in that of the other exanthemata.

“So, in conclusion, though I am not prepared to deny that mercury is beneficial in the treatment of syphilis, I do maintain that in the great majority of cases that we are called upon to treat, it should hold a secondary place to tonics, good food, pure air, stimulants in some cases; in short, anything and everything that has a tendency to build the patient up and put his system in a better condition to resist the ravages of this poison.”

Dr. Comegys dissented from the views held by *Dr. Judkins* regarding the exanthematous character of the disease only. It is not confined to the skin, but affects all the structures, particularly the connective tissue. He had treated successfully a case of paralysis, not long since, dependent on a cerebral neoplasm of syph-

ilitic origin; also, a hypertrophy of the liver, dependent on constitutional syphilis. Both of these cases yielded to iodide of potassium.

Dr. Mussey does not recognize the analogy between syphilis and scarlet fever. Syphilis is not a self-limited disease. Heredity disproves its exanthematous character. He seldom uses mercury in the primary stage of the disease, but begins specific treatment on the appearance of eruption; seldom gives mercury alone; prefers it in combination with iodide of potass. He disapproves of the use of mercury in large doses, and does not push the remedy to pyalism. He thought the use of mercury before the appearance of the secondary manifestations not only unnecessary, but harmful.

Dr. Bramble thought that in many respects syphilis partook of the nature of the exanthemata. He thinks a great change has taken place recently among syphilographers as to the curability of syphilis; thinks the doctrine of curability gaining ground. He thinks a syphilitic person may beget healthy offspring, if the mother is unaffected. As to the treatment, he is in the habit of using mercury, but waits for secondary manifestations. In this stage alone, he uses it.

Dr. Walker said there had been a disposition to postpone the use of mercury until secondary manifestations appear. There is no question as to the propriety of its use then. If it is not a dangerous remedy, and if it destroys the syphilitic poison, why not use it in the primary stage? He has made such use of it; generally gives it in the form of protoiodid, in combination with opium.

Dr. Kearney said one great argument against its use before the appearance of secondary symptoms was the difficulty in diagnosing the true syphilitic sore from the non-infecting sore. If the patient has an indurated chancre, he is as much a victim to syphilis as when the eruption has appeared. For these reasons he thought it safer to wait until the disease presents itself in an unmistakable form. He thought the mistake often made of not giving enough mercury; thinks if it were persevered in for a longer time, not so many cases of recurrent syphilis would be met with. The doctrine that syphilis is an exanthematous disease is not tenable. The disease is not self-limited, is not confined to the cutaneous manifestations, but affects the internal organs at the same time. As to the transmissibility of the disease, that is a point not yet settled.

Dr. W. B. Davis thought the theory advocated by *Dr. Judkins* not supported by sufficient evidence. The theory is contrary to the experience of the profession. He thought the use of mercury advisable in syphilis. If it could not be used in this disease, it ought to be left out of the pharmacopœia. He thought there was too much of a disposition to decry the use of mercury. It should not be abused, but the opposite extreme should be avoided.

Dr. Dandridge thought mercury a specific in this disease, if we had one. Its use is advocated in all the medical centers. *Ricord* and *Hutchinson* have advocated its use at an early stage, before a positive diagnosis could be made; but he thought the weight of testimony was against its use before secondary manifestations occur.

Dr. Williams said it would always be difficult to say when a person had recovered. A man with an indurated chancre may get well without the administration of any medicine. He would rather give mercury early than to wait for eruptions to appear. He thinks *the mercurial treatment the only one on which we can rely*, even if patients are debilitated. In that case he gives it in combination with tonics. He generally gives it hypodermically, giving from $\frac{1}{20}$ to $\frac{1}{30}$ gr. of the bichloride. He thought the mercurial treatment should be kept up for months instead of weeks.

Dr. Bramble thought chaneroid would abate without any treatment, but true syphilis would not. He inquired of *Dr. Williams* as to his views in regard to the duality of syphilis.

Dr. Williams did not believe in duality. Syphilis is syphilis, chaneroid is not syphilis.

Dr. Comegys agreed with *Dr. Walker* that mercury should be given early, without waiting for secondary symptoms. He said one of the worst cases of secondary syphilis he had ever seen had been treated by a celebrated New York physician as chaneroid.

Dr. Judkins said it was a proven fact that in a healthy person, with no hereditary disease, syphilis would disappear without mercurial treatment. He used mercury to affect the secretions, and because it caused a more rapid disappearance of the external manifestations of the disease, but he depended more on tonic and hygienic treatment. The iodid potass. he used in osteopic pains as he used opium, to relieve pain—not that he believed it removed the disease. He deprecated the long-continued use of mercury, which he thought tended to deteriorate the blood, rendering the

system less able to resist the ravages of the disease. Change of air, food, and manner of living do more to remove the disease than mercury and iodid potass.

The Society adjourned.

The Society met, pursuant to adjournment, December 8, 1874.

The discussion of the paper read by Dr. C. P. Judkins, at the previous meeting, on the use of mercury in syphilis, was resumed.

Dr. Hoeltge, in answer to the idea advanced by Dr. J., that no sane physician would try to prevent by medicinal means the appearance of the eruption in syphilis, said that he knew of no remedy having that power. He considered mercury an antidote to the syphilitic poison, and it was accused of injuries which should be attributed to the disease..

Dr. Epstein advocated the use of mercury in the treatment of this disease, but prefers using it by inunction, followed by the internal use of iodid of potassium. He never pushes the mercury to pyalism. By following this course of treatment he has had considerable success.

Dr. Judkins said his object in reading the paper was to bring before the profession the deleterious effects of mercury. He stated that Dr. Boeck had found that by abandoning the use of mercury, and having recourse to inoculation, he had had greater success in the treatment of this disease; and recent authorities bore him out in the statement that the use of mercury in this disease was baneful.

Dr. Kearney asked Dr. J. what he would substitute for mercury in the treatment of syphilitic iritis.

Dr. Judkins said that in such cases he dilated the pupil with atropia, and gave mercury.

Dr. Kearney thought the testimony of such a person as Dr. Boeck, who had a hobby, could not be depended upon. The speaker thought mercury hastened the elimination of the syphilitic poison.

Dr. Holdt said, in reply to the argument advanced by Dr. Walker, at a previous meeting, that he had seen secondary symptoms appear while mercury was being administered, and that when mercury had been used in the primary stage, larger doses were required in the treatment of the secondary manifestations when they do appear.

Dr. Epstein said, in regard to the marriage of persons who

had syphilis, that this disease should be no bar to matrimony. He thought statistics would bear him out in the assertion that although the first child of a syphilitic father might, and most probably would, be affected with constitutional syphilis, the succeeding children would be unaffected; but at least one year should elapse after the disappearance of symptoms before marriage.

Dr. Culbertson reported a case to disprove the assertion of *Dr. E.* The wife of a man who had constitutional syphilis gave birth to three children. The first died in a few hours. The second and third had constitutional symptoms. The mother had no specific manifestations.

Dr. Quinn reported a somewhat similar case. A woman, whose husband was known to have had syphilis, gave birth to several children. The first was still-born; the second lived but a few hours; the third had a syphilitic eruption. The mother had specific manifestations after the birth of the first child.

The Society then adjourned.

CLARKE COUNTY MEDICAL SOCIETY — DECEMBER MEETING.

W. G. BRYANT, PRES'T.

ISAAC KAY, SEC'Y.

The Clarke County Medical Society met in regular session December 10, at 2 o'clock p. m., *Dr. Bryant*, president, in the chair.

Members present—*Drs. Banwell, Bryant, Buckingham, Carroll, D'Richey, Hazzard, Harris, Kay, McLaughlin, Reddish, Reeves, Senseman, Seys, and Totten.*

Remarks were made by several members upon the subject of medical ethics. It was thought that a subject so intimately connected with the peace and harmony of the profession should occasionally receive the special consideration of the Society. Next to medical skill itself, there was nothing which would contribute more to the good reputation, dignity, and usefulness of the profession than a strict adherence to the code of ethics adopted many years ago by the American Medical Association, and accepted by all the

State medical societies of the Union. The provisions of the code should be carefully studied and obeyed. Further discussion of the subject of medical ethics was made the regular order of business for the monthly meeting in January next.

Dr. Senseman reported a case of leucorrhœa of great obstinacy. It had resisted all treatment for more than twelve months. He had used chalybeates internally, and astringents locally, such as have been prescribed by Drs. Thomas, West, and others. The speculum revealed the existence of ulcerations upon the cervix uteri. He had presented this case in order to get the views and advice of his professional brethren in regard to it.

Dr. Reeves thought that the term leucorrhœa was a misnomer. He had used astringents as a topical application, during his early practice, but he had afterward abandoned them. In most cases of what are called leucorrhœa there is ulceration, and consequent purulent secretion. The external organ of generation of the woman is very active in regard to its secretions. It is about as difficult to stop many of these secretions by astringents, as it would be to dam a stream of water running down a hillside. Ascertain the exact condition of the vagina and womb by means of the speculum. Purulent secretion will generally be seen. Treat the ulcerated parts upon much the same principle adopted in external ulcer.

The doctor recommended the internal administration of ergot. Several varieties of ulceration were met with in these cases. We have the red irritable ulcer. Use the camel's hair pencil, and bismuth. Cover the sores, often, with sweet oil. Put the patient under the bromide of potassa, and syringe the parts well with clean water. These cases, if a little prolonged, are very apt to fall into the hands of quacks. These unprincipled practitioners find a lucrative field here. *Dr. Reeves* severely criticised *Dr. Reamy's* plan of introducing a stick of lunar caustic and leaving it there. This practice was unwarrantable and dangerous.

Dr. Seys spoke of *vaginal, cervical, and uterine* leucorrhœa. Chronic endometritis is the most stubborn form of this disease to treat. In cases of green leucorrhœal discharge, use the iodine and glycerine treatment recommended by *Dr. Atlee*, of Philadelphia. *Dr. Seys* usually closed up his treatment of the greenish discharge with the *pinus canadensis*. In the white discharges, use chalybeates, and be careful to cleanse out the parts by rinsing with warm water. Many of the cases of leucorrhœa met with in our

country are the results of abortions, and many are brought on from mismanagement after parturition.

Dr. J. H. Rodgers thought that among the causes of leucorrhœa might be mentioned conjugal onanism among married women, and masturbation among virgins. *Dr. R.* thought that a physician did great injustice to himself and to his patients by treating this disease without making the adequate examination. Be certain of the true nature of the case first, and then institute your treatment. Use your mildest remedies first, such as clean warm water, glycerine, etc., and then afterward, if necessary, use iodine, and, if need be, still stronger applications.

Dr. Bryant spoke of the saturated solution of tannic acid. He was afraid of the stronger caustics, such as lunar caustic and caustic potash. He had had a satisfactory experience with the use of *pinus canadensis*.

Dr. Buckingham advised young physicians to have no speculum in their possession. The fewer instances in which the speculum is used the better. He once owned a speculum and lost it. He did not care whether he ever found it again. He concluded that if he should ever need to use a speculum he would borrow one. He did not expect to need one of these instruments soon again, if ever.

Dr. McLaughlin had but very little or no respect for gynecology. There seems to be such a prurience with many women to believe that they have disease of the womb, that quacks have made a perfect raid upon humanity in this direction. He had seen so much humbuggery with the speculum and other gynecological appliances, that he had become very much disgusted with them, and prejudiced against them. Attend to the general health, by tonics, cleanliness, and generous food. This course, with mild topical remedies, will generally cure the case.

The Society adjourned, to meet again on the second Thursday in January next.

Vick's Floral Guide for 1875.—Published quarterly. January number just issued, and contains over 100 pages, 500 engravings, descriptions of more than 500 of our best *flowers and vegetables*, with directions for culture, colored plate, etc. The most useful and elegant work of the kind in the world. Only 25 cents for the year. Published in English and German. Address JAMES VICK, Rochester, N. Y.

Hospital Reports.

PLEURO-PNEUMONIA.

TREATMENT BY COLD BATHS AND COLD APPLICATIONS.

Service of Dr. COMEGYS. Reported by Dr. ROBERT SATTLER, Resident Physician.

William H. Woods, colored, æt. 15; Virginia; hotel boy.

August 12. Patient was brought to the hospital this afternoon, presenting about the following condition and symptoms:

Young colored boy, of average height and development; apparently in great suffering, and consequently can not give any lengthy account of his illness. On Sunday (yesterday) he first experienced the onset of the present trouble (having, prior to that, always enjoyed good health), with marked fever, and intense pain on the right side of the chest, in the region of the nipple. Painful and difficult respiration, and very slight, but very painful cough; anorexia, lassitude, headache, and general malaise. These symptoms became more pronounced in the course of the next day, when he was admitted to the hospital.

Symptoms on Admission.—Anxious expression of countenance; respirations 48, short and hurried, and almost altogether abdominal; pulse 122, full and strong; throbbing of carotids; skin hot and dry; temperature $104\frac{1}{2}^{\circ}$; complains of severe pain in the chest on the slightest movement; cough suppressed and painful; slight rusty discoloration of the sputa; appetite gone; tongue heavily coated; papillæ prominent; bowels loose; lassitude, and marked prostration.

PHYSICAL EXAMINATION.—Inspection.—Entire lack of movement over the right side of the chest, except immediately under the clavicle. Respiration altogether abdominal.

Percussion.—Slight impairment of resonance over the middle and lower portions of the right lung. More resistance and a higher pitch posteriorly and in the axillary line. Vocal fremitus increased over the right side.

Auscultation.—A distinct friction sound is heard, its intensity being at a point about one inch below, and a little external to the

right nipple. Fine, moist inspiratory rales over the lower and middle lobes of the right lung and in the axillary space.

Ordered *veratr. viride*, gtt. ij, every two hours, and patient to be enveloped in cold wet sheets, and these to be changed at short intervals; stimulants and beef-tea freely.

August 13. Somewhat dull and blunted state of mind; complains less; cough and respiration less painful; expectoration viscid, not altogether rusty; tongue dry and coated.

A. M. Temperature 100° ; pulse 74. Discontinued *veratrum viride* and ordered *R. quin. sulph.*, grs. ij; *spts. frumenti*, $\overline{3}$ ss, every two hours, and to continue the cold application.

4 P. M. Temperature $104\frac{1}{4}^{\circ}$; pulse 96; respirations 46. Physical examination: Slight dullness, on percussion, over the lower portion of the right lung, anteriorly and posteriorly; fine crepitant rales, on inspiration, heard most distinctly at a point midway between the right nipple and axillary line; friction sound only heard on forcible respiration. Continued treatment—cold application, etc.

August 14, 7 A. M. Some better this morning; cough easier; expectoration not copious, but adhesive and rusty. Temperature 103° ; pulse 94; respirations 40. At 10:15 A. M. placed the patient in a bath of 80° ; allowed him to remain for fifteen minutes. Temperature before the bath was $104\frac{1}{2}^{\circ}$; after the bath, $99\frac{1}{2}^{\circ}$ in axilla and $102\frac{1}{2}^{\circ}$ in rectum.

5 P. M. Temperature 106° ; pulse 108; respirations 46. Again placed patient in a bath of 80° , reducing the temperature of the water gradually to 76° . The temperature after the bath was 101° in rectum and $99\frac{3}{4}^{\circ}$ in axilla. Pulse 86, and of moderate volume.

August 15. At 7 A. M., temperature 103° ; at 10 A. M., 106° . Pulse 104; respirations 36. Pain and cough less; breathing less painful; appetite nihil; tongue heavily coated. Gave bath at 10 A. M. Temperature of bath 80° , gradually reduced to 74° , and allowed patient to remain fifteen minutes. After the bath the temperature was $102\frac{1}{2}^{\circ}$ in the rectum and $99\frac{1}{2}^{\circ}$ in axilla. Pulse 90; respirations 32.

5 P. M. Same dorsal decubitus; cough more painful, and accompanied by a very copious adhesive and rust-colored expectoration. Temperature $104\frac{1}{2}^{\circ}$; pulse 114. Gave bath at 4:10 P. M., of 80° .

The temperature after the bath was reduced to 102° in the rectum. Pulse 80. Physical examination: Dullness on percussion over the anterior, lateral, and posterior portions of the base of right lung; distinct tubular breathing; increased vocal fremitus

and resonance. Chlorides present in abundance in the urine. Continued beef-tea and stimulants.

August 16, 7 A. M. Temperature 102° ; pulse 108; respirations 40. Cough and expectoration not attended with so much pain; copious rusty sputa. On physical examination, dullness and tubular breathing over the base of the right lung.

5 P. M. General condition better. This afternoon again had a marked febrile exacerbation. Temperature 105° ; pulse 110. Gave bath, 80° ; allowed patient to remain eighteen minutes. After the bath the temperature in the axilla was 99° and 100° in the rectum. Two hours later the temperature was $101\frac{1}{2}^{\circ}$ in the axilla.

August 17. Quite comfortable; slept well. Temperature $102\frac{1}{2}^{\circ}$. Bronchial breathing most distinct in the superior axillary region; dullness marked; some moist rales. Chlorides abundant in the urine.

5 P. M. Temperature 103° ; pulse 96. Ordered patient wrapped in wet sheets wrung out of cold water of 76° . Continued quin. and spts. frumenti, with plenty of nourishment.

August 18, A. M. Temperature 102° ; pulse 112; respirations 38. Slept several hours last night.

P. M. Temperature 103° . Does not complain much. Expectoration profuse and viscid.

August 19, A. M. Temperature 102° ; pulse 104; respiration 36. On auscultation, well-marked tubular breathing posteriorly and in axillary space.

P. M. Temperature 103° ; pulse 120.

August 20, A. M. Temperature 101° ; pulse 99; respirations 32. Better this morning. Says he feels quite comfortable. Cough and respiration easier. Still continuing cold applications.

P. M. Temperature $100\frac{1}{2}^{\circ}$; pulse 98.

August 23. Doing very well. Complains but little. Discontinued cold applications, and ordered quin. and spts. frumenti three times a day.

August 24. Improving. General condition much better; appetite very good. Auscultation reveals crepitus redux. over lower portion of base of right lung. Discontinued quin. and spts. frumenti, and ordered R strychniæ sulph., gr. j; acidi. sulph. aromat., gtt. iij; aquæ distill., $\mathfrak{z}\text{ij}$. M. Sig. gtt. x, three times a day.

August 26. Steadily improving. Respiration broncho-vesicular. Cough and expectoration very much less.

August 28. Improving. Patient is up and about the ward.

September 1. Discharged.

TYPHOID FEVER—COLD BATHING.

Edward Howard, æt. 22; England; teamster.

September 4. About two weeks ago the present trouble was ushered in by a feeling of lassitude, malaise, anorexia, thirst, chilly sensations, slight febrile excitement, and frontal headache. About five days after the appearance of these symptoms, diarrhea was added, accompanied by slight abdominal pain and tenderness. The frontal headache now became more severe and constant, together with a feeling of more marked prostration, disturbed sleep, and restlessness.

Symptoms on Admission.—Young man of average height and good muscular development. Face flushed. The countenance has a blank and exhausted aspect. He answers questions evasively and a little irrationally. Some wandering of the mind. Appetite gone. Tongue heavily coated, with a tendency to dryness and to the accumulation of sordes. Is very restless. Complains greatly of frontal headache and nausea. Bowels loose; two, three, and sometimes four stools within the twenty-four hours. Some exfoliation of the epidermis at points. Pulse 84, feeble, and compressible; temperature $103\frac{1}{2}^{\circ}$.

Physical Examination.—Thoracic organs normal. Abdominal inspection—numerous rose-colored lenticular spots scattered over the abdomen and thorax; slight tympanitis; tenderness on pressure, and gurgling in the right iliac fossa. Ordered spts. mindereri, ζij every three hours.

September 5. Slept several hours during the night. Still that same blunted and vague expression and flush of the face. Conjunctivæ injected. Wandering of the mind became more marked during the night, but is not so much so this morning. He had two stools in the bed, of a very offensive odor and leaving a yellow-ochre stain on the bed-clothing. Temperature $102\frac{1}{2}^{\circ}$; pulse 80, feeble and compressible; respirations 24. Ordered R quin. sulph., grs. xxx; morph. sulph., gr. j; ext. gent., $q. s.$, et ft. pill. no. xxx. Sig. one pill every two hours.

10:18 A. M. Gave bath of 86° ; reduced the temperature of the water to 78° ; allowed to remain ten minutes. Before the bath, pulse 84; temperature 104° ; respirations 30. After the bath, pulse 94, very feeble; temperature 103° in rectum, and $100\frac{3}{4}^{\circ}$ in axilla.

6 P. M. Some better this evening. Mind clearer. No headache. Gave bath of 80° ; allowed to remain ten minutes. Before

the bath, pulse 86; temperature $104\frac{1}{2}^{\circ}$. After the bath, pulse 84; temperature 101° in the axilla and $103\frac{1}{2}^{\circ}$ in the rectum. To have wine whey and milk diet.

September 6. Pulse 84, feeble and compressible; temperature $102\frac{1}{2}^{\circ}$. Slept several hours during the night. Tongue very dry and coated. Sordes on teeth and gums. Urine and feces were passed in bed; stools very offensive.

10:10 A. M. Gave bath, 80° ; allowed to remain ten minutes. Temperature before the bath, $103\frac{1}{2}^{\circ}$ in axilla; pulse 90. Temperature after the bath, 103° in rectum, 101° in axilla; pulse 96. Rose-colored spots continue over chest and abdomen.

4 P. M. Temperature $104\frac{3}{4}^{\circ}$; pulse 100. Two stools since morning. Gave bath at 4:30 P. M. Before the bath, temperature $104\frac{3}{4}^{\circ}$; pulse 98; respirations 30. After the bath, temperature 103° in rectum, $101\frac{1}{2}^{\circ}$ in axilla; pulse 104; respirations 26.

September 7. Temperature $102\frac{3}{4}^{\circ}$; pulse 86. Tongue dry and heavily coated. Mouth dry. Teeth covered with sordes. Tympanitis more marked. Tenderness on pressure in right iliac fossa. Gave bath at 10:15 A. M., temperature 80° , for ten minutes. Before the bath, the temperature 103° ; pulse 90; respirations 26. About fifteen minutes after the bath, he became almost pulseless; respirations hurried and irregular; extremities cold. The patient was immediately covered with warm blankets, and half an ounce of brandy was administered, he rapidly recovering from the shock.

3 P. M. Much better this afternoon. Pulse 88; temperature 103° . Very much prostrated and exhausted. One stool since morning. Ordered patient enveloped in wet sheets wrung out of cold water. Continue wine whey and beef-tea freely.

September 8. Slept about five hours. Pulse 110; temperature $102\frac{1}{2}^{\circ}$. Was delirious all night; the delirium continues in a mild form this morning. Tongue heavily coated, dry, and fissured. Continue treatment and cold applications.

September 9. No change. Temperature 102° ; pulse 98. Was delirious all night; mind much clearer this morning. Three stools during the night.

September 10. Very perceptible improvement this morning. Slept well last night. Answers questions quite rationally. No frontal headache. Abdomen still tender and tympanitic. Pulse 90; temperature 101° . Discontinued wine whey. Ordered $\frac{3}{4}$ ss whisky every four hours, and take the pill of morphine and quin. every four hours.

September 11. Improving. Mind clear. Temperature 99°; pulse 86. Discontinued cold applications. Feeling of very marked prostration and exhaustion. Two stools. Abdominal tenderness much less marked.

September 26. The patient now steadily improved; the temperature ranging between 99° and 100°; pulse 74 to 86. Tympanitis and abdominal tenderness have disappeared. Bowels still continue loose; one or two stools within the twenty-four hours. Countenance brighter. Discontinued the pill of quin. and morphia.

September 29. Doing well. Daily gaining in strength. Bowels better.

October 2. Discharged well.

[REMARKS.—In these cases marked amelioration resulted from the cold bathing. To have made a more decided impression on the fever, the baths should have been given as often as the fever arose, even as many as five or six in twenty-four hours. Then, although neither the typhoid patient nor the pleuro-pneumonic one would have had their usual number of days of duration lessened, yet the symptoms would have been more notably simplified. The notes show that they were both grave cases. In the pneumonic one, the exudation of blood into the bronchi, owing to the intense congestion, was very considerable: it appeared as a frothy sputa, saturated with dark blood. My most satisfactory experience with cold baths has been in the gastro-enteric fevers of young children. I propose to publish some cases ere long.—C.]

The following ancient and wholesome oath was taken by young physicians at Montpellier. It was at Montpellier that Rabelais was professor; as also Rondelet, the father of modern zoology:

"I, Isidore, etc., etc., before the statue of Hypocrates, and in presence of the professors of this school, and of my dear fellow students, do, in the name of the Most High, swear to be faithful to the laws of honor and probity in the practice of medicine.

"I will attend the poor gratuitously, and never will I exact more pay than my work is worth. When called to visit families, my eyes shall not see what there takes place; my tongue shall keep silent on the secrets confided to me, and my profession shall never serve for the corruption of society, or in the furthering of crime.

"Respectful and grateful toward my masters, I will hand down to their children the lessons I have received from the fathers.

"If I am faithful to my oath, may men honor me; may I be covered with disgrace and scorn by my associates, if I fail."—*L'Hermit en Province*, p. 343, vol. ii.—*Boston Medical and Surgical Journal*.

Selections.

Billroth on the Present Phase of the Inflammation Theory.—The opinions of Billroth on matters relating to surgical authority have always claimed attention, from the fact that he is both an original investigator, and has a lucid way of describing what he has seen and read. He has lately been preparing a new edition of his book, and in recasting the chapters on inflammation and regeneration of tissues, he has taken occasion to condense the prevailing opinions on these subjects and express them in a palatable shape. He pays a tribute to the faithful labors of Rokitsansky, but thinks it must be conceded that his views have, in a great measure, been superseded by those of Virchow and others, who, during the last twenty years, have accumulated an amount of new material bearing on these questions. One of the first views introduced by Virchow was, that inflammation was caused by a disturbance of nutrition; subsequently, he located the commencement of the change in the connective-tissue cells, whose *formative activity* represented a most powerful factor in the process; the phenomena of *fluxion*, *stasis*, and *exudation* were accordingly made by him to pay a subordinate rôle. The most recent investigations of Cohnheim and Samuel, published in 1873, add further proofs to show that inflammation is excited primarily by some changes in the tissues themselves, and not in the blood, and these changes give rise, secondarily, to the phenomena of dilatation, stasis, etc. Thus, Cohnheim speaks of a *chemical alteration in the tissue of the vascular walls, especially of the veins and capillaries*, as the most important excitement of inflammation, while Samuel believes that there is a *disturbed relation between tissue, vessels, and blood*, whatever this may be. All their views were derived from independent studies by different methods. Billroth is inclined to believe with Cohnheim, that the alteration consists in a chemical change in the tissue, and he also believes that the products of it do not simply act as ferments by contact with the healthy tissue, but that they also get into the circulation and produce the ally of inflammation, viz., fever. The results of clinical observation justify him also in supporting this view.

As for the relation between these secondary phenomena and in-

flammation, it has been shown by Schiff, Cohnheim, Samuel, and others, that neither (1) the dilatation of the vessels, nor (2) the blood-stasis, nor (3) slight fluxions produce inflammation; but after these conditions have lasted a considerable time, with some intensity, there is a relaxation and softening of the veins and capillaries, which is followed by exudation, increased local heat, and possibly escape of red blood-corpuscles; and also, at the same time, as long as the circulation remains active, an enormous emigration of white blood-corpuscles. As to this latter fact, there seems to be no further doubt among microscopists that it does actually take place; and there is no distinction between such cells and pus cells, wandering cells, young exudation cells, and lymph cells. Virchow's idea that pus originated from the connective-tissue cells was opposed by the fact (1) that in many instances of inflammation the connective-tissue cells appeared to be intact, and (2) by Cohnheim's discovery, in 1866, that these so-called connective-tissue corpuscles were white blood-globules that had escaped from the vessels; and he further observed that the escape was coincident with the formation of pus, while as yet there was no change in the connective-tissue cells, and accordingly the connective-tissue cells of the part took no share in primary acute inflammation. Whether they did secondarily, or at least later, was not known.

Now, as to what becomes of the emigrated cells, Billroth gives the views of Hering, that some leave the tissues by the lymphatics, and get back into the general circulation; others again appear on the surface of the membranes or on wounds, under the form of pus, and are swept off. In this way, after emigration ceases, the tissues can be entirely freed from the cellular infiltration, and they return, as also the walls of the vessels, to their normal condition. Other cells again remain and undergo various modifications; they can divide, as observed by Stricker and Key; sometimes they enlarge, and many nuclei are formed in them, and these cells may divide, as observed by Key. If the tissue that is thus infiltrated dies, the infiltrated cells perish with it, and they may then either be thrown off or remain under the form of a softened mass—the dry, yellow infarction, which later may become tuberculous or calcareous, and may also cause a new inflammation about it.—*Wien. med. Woch.*, 26, 1874.

Editorial.

Off with the Old and on with the New.—With feelings of gladness and good cheer we offer our congratulations to our friends, and wish you all a happy and prosperous New Year. It was with feelings of trepidation and fear that we undertook the management of the LANCET AND OBSERVER one year ago, knowing it to be one of the best sustained journals in the West. But remembering that faint heart never accomplished anything, we assumed the responsibility, and, at the beginning of another new year, it is with unfeigned pleasure we are able to say complaints have been few and encouragements frequent. We have endeavored to shape the policy of the journal according to what we believed to be the best interests of the medical profession and of medical science. During the present year, we have the promised co-operation of a large number of prominent men in the profession, who propose to enrich the pages of the journal by their contributions. The indications are that this will be a year of unusual activity among investigators in medical science. Whatever may be accomplished in this direction will be placed before our readers at the earliest possible time.

New books will be fully and carefully reviewed, giving the reader a good idea of their contents and value. This department will receive special attention, as in these days of the making of books there seems to be no end. Some are absolutely essential; others convenient to have, and worthy of a place in the library; while others, again, are not as valuable as waste paper, for they teach false doctrines, and should be permitted to remain on the publishers' shelves.

Shall Physicians assume the Role of Protectors of the Children who attend the Public Schools?—We unhesitatingly answer, yes. They have more abundant opportunities to witness false methods of teaching than men engaged in other pursuits. Besides, they are ever and anon compelled to hear the wail of some poor innocent, whose physical and mental nature could hold out no longer against the severe strain placed upon it, and is finally compelled to

succumb to a low grade of fever or nervous exhaustion. It is the universal testimony of physicians, that such cases are of very frequent occurrence in this city; and we are fain to believe that Cincinnati is no exception, but that overtaxation of both brain and muscle is the rule in the public schools in nearly all towns and cities.

A committee from the Cincinnati Medical Society recently called the attention of the board of education to the fact that the children who attend the public schools are kept in school too many hours during the day, making the statement on purely physiological grounds. The time then allowed was one hour for the noon recess. This the board extended half an hour. This action applied only to the district and intermediate schools. The high schools have but one session per day. * The committee should have gone further, and demanded a change in the curriculum of studies. There not only seems to be, but there actually is, a rivalry existing between the different schools of the same grade, as to the rate of percentages that shall be exhibited at the end of the school term or year by the different classes.

Within proper restrictions and bounds, this may be justifiable, as a stimulant to both teacher and pupil; but when it is carried to such an extent that the very best and most intelligent pupils are compelled to study eight or nine hours every day, in order to get the lesson given by the teacher, and thereby retain a fair standing in their classes, and obtain a reasonably high percentage for exhibition, we say the system is bad, and humanity is outraged.

The brain of the average American child or youth is generally equal to any emergency that may be reasonably presented; but there is a point beyond which it can not go with safety, and that point is more than reached in our public schools. The curriculum of studies is arranged according to the physical and mental ability of the strongest and most healthy scholars, embracing probably one-tenth of the whole number. The other nine-tenths, including those of medium and inferior strength and ability, are expected to accomplish as much, and show as high a rate of percentage, as their more fortunate mates. To say that this is unreasonable, is putting the case too mildly. And yet we see these scholars ambitious to retain their places in their class and grade, and are spurred on by a teacher equally ambitious that her class shall show as high a rate of percentages as those shown in the same grade in another school. So the stuffing and cramming process is continued, until

poor human child-nature gives way; and the doctor is sent for, who, on inquiry, finds a condition of affairs similar to that above related. Invariably the first instruction is, take the child out of school. Both child and parent frequently remonstrate, that they do not wish to lose a whole year of schooling. "Better that," says the doctor, "than a permanently shattered brain and physical constitution." The final result of the whole business is, that physicians are to a very considerable extent the responsible protectors of the children who attend the public schools.

We would not have any one infer that, because we criticise the percentage system and course of studies laid down in the curriculum in use in the schools of this city, and characterize them as evils, in connection with memoriter teaching, of which we have said nothing, that we are consequently opposed to the free school system. On the contrary, we regard it as one of the chief pillars of our republican form of government, and would sincerely regret to see any effort made that would look to their abandonment. But the methods of teaching, and the requirements made of the pupils, must be kept under the surveillance of those who have an intelligent appreciation of the situation. And we again reiterate, that physicians, by reason of their peculiar education and facilities for observation, are the natural protectors of the children. Their influence should be felt and acknowledged by every school board in the land.

Public Health.—There will be several bills introduced in the Ohio Legislature during the present session for the creation of a State Board of Health; and one by the Committee on State Medicine and Hygiene, appointed at the last annual meeting of the Ohio State Medical Society, entitled "a bill for the appointment of a health commissioner, and prescribing his duties." We have a feeling of deference for the gentlemen who compose that committee, and are loth to differ from them as to the kind of a bill that will meet the wants of the great and populous State of Ohio. What is needed is a State Board of Health, composed of at least six persons besides the secretary, who will give a very considerable portion of their time and attention to investigating the causes that affect the health of the people, the enforcement of measures for protection against the ravages of epidemics, etc. The labor required is too great for any one man. The secretary or commissioner would no doubt accomplish a great deal in the way of collecting

vital statistics and reports from different parts of the State, and arranging them so as to be of practical value; but his work will necessarily be what is known as office-work. The labors of the board would, on the contrary, partake of the character of personal observations and inquiries into the causes that operate in producing sickness and ill-health. Our sister State of Michigan has set our legislators an example worthy of imitation. Her board of health, judging from their reports, is a model of its kind.

Scarlet Fever has been more or less prevalent in Cincinnati for a period of eighteen months. Lately there has been a mortality of about eight deaths per week from the disease. We believe one of the most efficient causes of the propagation of the disease is through the medium of the schools. And on the principle of isolation, which is the only way we have of stamping out the disease, we suggest to boards of education and school directors that all children who belong to families who have suffered from the disease be required to present a certificate from the attending physician, stating that the family has been entirely free from the disease for a period of at least two months, before they are allowed to enter the school. Much better that half a dozen children be compelled to lose a few months' schooling than that even one death, or the illness of one of their mates, be caused by their speedy return to school after exposure to this dreaded affection. Hot, overcrowded, and badly ventilated school-rooms are just the places to spread the infection, and too often prove hot-beds for that purpose. Dr. Quinn, the city health officer, recently remarked, in the Medical Society, that we might soon look for an epidemic of small-pox, as the city had been entirely free from the disease for two years. Consequently, vaccination had been almost entirely neglected among young children. All children, before being allowed to enter a public or private school, should be required to produce a certificate from a physician, stating that the bearer had been vaccinated. Such a proceeding may seem arbitrary; but the prevention of an epidemic of a loathsome disease is paramount to all minor considerations.

The following address was made by our very worthy and public-spirited citizen, Mr. Henry Probasco, at the annual celebration of St. Andrew's day, by the Caledonian Society of this city:

"The arts and sciences, as developed at home (Cincinnati we mean)—may its patrons develop with the progress of the age," was

a volunteer toast offered by Mr. David Gibson. In response to loud calls Mr. Henry Probasco arose, and, after a hearty greeting by the company, spoke as follows:

*"Gentlemen of the Caledonian Society:—*It was not my good fortune last year to be present on this anniversary, but though absent, my imagination recalled many pleasant hours passed in your company. Shortly afterward, during a long day's excursion from Naples to Amalfi, while examining the antiquities and architecture of that once famous city, I wandered with the feelings of a pilgrim through its venerable cathedral, nearly a thousand years old, dedicated to St. Andrew. Descending to its subterranean passages below, and its lower crypt, amid a wealth of rarest marbles, mosaics, and gold, where for ages lamps have burned unceasingly before its altar, beneath which the body of St. Andrew remains, from the time it was brought from Constantinople, after the reconciliation of the Greek and Latin churches, I realized the force of those traditions, which have set apart this day in the Christian world, in memory of his martyrdom. There, in that very crypt, in A. D. 1218, St. Francis of Assisi reverently worshipped. There, Urban IV., St. Brigidi, Pius II., and others famous in history for more than six centuries, have made pilgrimages in honor of St. Andrew, the patron saint of Scotland. Your society, though few in number but abundant in charity, does well to commemorate this day. For several years the day has been specially commended by the present Protestant Episcopal bishop of Ohio as a day of special intercession for missions, making a personal appeal besides for prayers and alms in aid of such as are engaged in that service.

"To the sentiment which has been proposed, 'The Future Museum of Science and Art in Cincinnati,' it would give me pleasure to respond at length if your time and the occasion permitted.

"But, gentlemen, waiting another opportunity, let us consider for a few moments what has been accomplished here within a few years past, and to what extent the public opinion is educated, and whether it be prepared to second any earnest movement which would insure the success of so important an enterprise.

"Certainly the public mind, seven years ago, would have been unprepared to anticipate the magnitude of the complete success which has crowned the Industrial Expositions, which have done so much for the fame and prosperity of the city. Somewhat later,

the success of the beautiful bridges over the Ohio, which connect us with our sister State, was problematical. Seven years ago that noble edifice, our public library, one of the largest of its kind in the world, with its increasingly valuable treasures, had been scarcely born.

"Scarcely then had it entered into the hearts of two of our merchants to give a magnificent building for that noble charity, the Good Samaritan Hospital. And this very year, those noble institutions, the Cincinnati Bethel and the Young Men's Christian Association, which have struggled and lived so long in the hearts, and by the exertions of our Christian men and women, we see established upon the surest foundations by the generous deed of a man whom we all delight to honor. Shall we not mention, also, that most noble gift, the endowment of the school of design, one of the most far-sighted benefactions ever conferred upon the people of Cincinnati? When you recollect that all great creations in art must have a source, a birth, and their first fruits in a school such as this, and that it is impossible to express such thoughts as the world honors in the cartoons and frescoes of Giotto, Raphael, Michael Angelo, William von Kaulbach, and the great masters of sculpture and painting, without this early training, you may comprehend, in some small degree, the immense importance of this unselfish act. A distinguished citizen of our city, upon a great public occasion, asked, 'What did the people need more than a fountain?' Can it be said that the time has arrived when they will quickly answer, 'The Cincinnati Museum of Science and Art?' If so, let it stand upon that beautiful eminence in the center of the Burnet Woods Park. Let it possess its special grounds, which shall be in effect the gem of the great park, itself an esplanade for promenades in every direction, a botanical garden containing hardy indigenous plants, trees, shrubs, as well as those from all quarters of the globe, which flourish in our climate in the open air. To this lovely spot, commanding views of surpassing beauty, and soon to be within ten and fifteen minutes' time from all the central portions of the city, free from its din and smoke, an edifice may be built which will forever be your chiefest glory. It may be made the home for schools of various sciences, the permanent abode of all the fine arts. To this atmosphere of refinement, surrounded by gardens, you would conduct the stranger with a conscious pride that it was the best hospitality to be shown to him.

"A building much inferior in magnitude to that of the South

Kensington Museum, but embodying some of the essential conditions, will be adequate to our wants. Boston, New York, and Philadelphia are each from two to three years in advance, and already possess temporary buildings for the accommodation of collections purchased and loaned. It should not be our reproach that, to show anything valuable in art, we must say that they exist only in private collections, which may be almost inaccessible. Not only may such a building be an institution for advanced education in 'its highest and widest sense,' but it would certainly be the most valuable repository in the West for an assemblage of cabinets of natural sciences, Indian antiquities, loan collections, and an art library. Here, also, may the owners deposit for safe keeping, during absence from home, valuable art property, safe from fire, mutilation, and injury, while at the same time they confer pleasure and instruction to their fellow-citizens.

"And now, gentlemen, allow me a word more upon the social and moral influences which will be realized from the building of such an institution.

"Let me say that last year there were but two arrests for disorderly conduct in the South Kensington Museum, from the 13,500,000 who visited that building, and no damage worth mentioning done to that stupendous collection, the value of which amounts to almost a hundred million of dollars.

"There are many of us who feel and acknowledge the want, even the urgent necessity, of galleries, where we can spend an hour or a day for pleasure or study; where young and old, citizens and strangers, may have, and would surely receive, the refining influences of an atmosphere of art without money or price, and none more frequently than those who have received the advantages of travel at home and abroad. Is it not high time that an accumulating wealth, with its power, should expand itself in that direction which exalts the moral and intellectual forces, and in a direction very much needed, to place our people on a level with those of the Old World? This museum of science and art will give us a standard by which we may measure not only ourselves, but discuss diligently and appreciate what we may see elsewhere. And thus, in so far as we may acquire this education, we shall be enabled to advance toward the full enjoyment of some of our highest faculties.

"Finally, as I glance at some of the pleasures which may be enjoyed by the best uses of money, and by the possessors of great

wealth, especially in connection with the fine arts, I can not but admire that anecdote of Napoleon, who, when he was offered, by one of the conquered Italian cities, a million of francs as the ransom for a single statue, and his generals urged him to accept it, 'No,' he replied, 'you would squander the money in a week. Gold can not create *chefs d'ouvres!* This work, immortal as the genius which created it, shall educate and refine the French people.'"

Mr. Probasco, in closing, called out Mr. James Robb, who spoke of the humanizing influences of the arts and sciences, and commended the people who acquire wealth, not for selfish ends, but to benefit mankind.

We publish the above address because we believe there is no class of persons so universally interested in the progress of the arts and sciences as physicians; and that our readers may know that there are men of wealth and influence in our midst who propose to make Cincinnati a great center of art, science, literature, and education.

In this connection, we call attention to the statement in General Eaton's report of the National Board of Education for 1873, in which he states that, during the year, private citizens of the United States had donated eight millions of dollars to educational endowments. Now, we have reason to believe that scarcely a dollar of that large amount was given to medical schools. The successful effort lately made to secure a munificent endowment for the medical department of Harvard University, following so soon after the successful establishment of a graded course of instruction, gives evidence of the dawn of a better day, and brighter prospects for an improved and more thorough course of medical teaching in our medical schools.

Literary and scientific colleges, all over the land, open wide their doors and freely offer the instruction that may be obtained therein to all who choose to enter, without money and without price. Every theological institute in this country of which we have any knowledge, is endowed; and in many of them a generous provision is made for the support of the students who are in attendance on the course of instruction there provided.

We behold large amounts of money given, and given freely, for all other kinds of educational purposes except medicine. Why is this? Is it because medical teaching is of no importance, or that it makes no difference to the people at large whether the fifteen hundred or two thousand doctors, who are annually graduated in medicine from the existing colleges, are qualified to combat disease, set a

fracture, arrest a hemorrhage, or meet, at a moment's notice, any of the emergencies that practitioners of medicine are called to meet? On the other hand, has not the medical profession peculiar and just claims to present to those who are possessed with large amounts of this world's goods. No other profession or class of men is so constantly called upon to give of their time and skill in ministering to the wants of the poor. At any hour in the twenty-four, the most laborious and skillful physician is liable to be called to the bedside of the most destitute creature in the neighborhood; and how seldom do we hear of a refusal to go, but ever the cheerful response. And then, what family of wealth and influence in any community but has had some member dependent for their lives, or at least for relief from excruciating pain, upon the family physician. Are these services canceled, and the obligation ended, by the payment of a small fee to the attending physician? Should not the school or college that imparted the knowledge of how to manage such cases be remembered in the shape of a benefaction from those who are able to make the gift, or, we should say, pay the debt?

Further, were the medical colleges amply endowed there would not be seen that personal rivalry that so often exists between medical schools; and we would more frequently witness students seeking institutions because of their merits and peculiar advantages.

As Mr. Probaseo intimated in his speech, that at no distant day Cincinnati will have, among other attractions, a museum dedicated to art and science, we will state that there already exists here some of the finest collections of anatomical and pathological specimens that are to be found in the United States.

We believe the existing medical colleges in Cincinnati will compare very favorably with those of other cities; but we also believe the time is near at hand when there will be a radical change made in medical education, and the school or city that takes the initiatory steps in establishing a graded course of instruction, requiring a suitable preliminary education, and with endowed professorships, the only fees required being for matriculation and graduation, will speedily have a large company of followers in other schools, and receive the approbation of the profession at large and the indorsement of the people.

A mere Matter of Taste—Only this, and nothing more.—A gentleman who is practicing a specialty in this city reports and boasts of

his recent performance of the operation for the cure of vesico-vaginal fistula on *his own mother*. The case is reported as of thirty years' standing. As to the possession of any feelings of refinement or propriety by the gentleman, "we stay our pen" from the discussion. Our readers will make their own comments.

Unusual Offer.—Dr. E. J. Gaillard, of Louisville, Ky., editor of the *Richmond and Louisville Medical Journal* and of the *American Medical Weekly*, makes to the public this unusual and liberal offer: To subscribers to the first journal, twelve handsomely engraved portraits of distinguished European and American physicians; to the subscribers to the *Weekly*, one of these portraits in each of the two volumes for 1875. The price of the first journal is \$5.00 annually, and that of the last, \$2.00 for the same period.

The Catalogue of the specimens in the Pathological Museum of the Philadelphia Hospital is laid on our table. It is prepared by Drs. James Tyson and R. M. Bertholet. We are somewhat surprised at the meagerness of this collection, as it contains less than three hundred and fifty specimens.

To a club of twenty subscribers, *Lippincott's Magazine* is put at \$3.00 per year to each, and *Chambers' Encyclopædia*, the most thorough and reliable work of general reference, ten vols., royal 8vo, bound in sheep, price \$50.00, is presented, carriage free, to the person getting up the club. Regular subscription price, \$4.00.

A New Tonic—"Boldo."—Researches have been made by Messrs. Dujardin, Beaumetz, and C. L. Verne on this proposed addition to our list of medicines.

Boldo is a tree found in Chili, of a height of five or six feet, isolated on mountainous regions, with yellow blossom and a verdant foliage. Its bark, leaves, and blossoms possess marked aromatic odor, resembling a mixture of turpentine and camphor. The leaves contain largely an essential oil. It contains an alkaloid which is already called "boldine." Its properties are chiefly as a stimulant to digestion and having a marked action on the liver. Its action was discovered rather accidentally, thus: Some sheep which were liver-diseased were confined in an inclosure which happened to have been recently repaired with boldo twigs. The animals ate the leaves and were observed to recover speedily. Direct observations prove its action; thus, one gramme of the tincture excites appetite, increases the circulation, and produces symptoms of circulatory excitement, and acts on the urine, which gives out the peculiar odor of boldo.—*Medical Press and Circular*.

Obituary.

The late Dr. S. P. Bonner.—Dr. S. P. Bonner, a well-known physician of this city, died at his residence in Cincinnati, Tuesday morning, December 22d. He was scarcely in the prime of life, when he was cut down, but he had lived long enough to gather about him many friends.

A meeting of the regular medical profession was held at the rooms of the Cincinnati Medical Society, December 24th, to take action in regard to his death. Dr. C. G. Comegys was called to the chair, and Dr. J. J. Quinn appointed secretary.

Dr. Comegys, on taking the chair, said:

"GENTLEMEN :—Not infrequently have we been called together during this year to mourn over the loss and commemorate the virtues of our professional brethren; but hitherto they have been those who had lived to a period of advanced life, and who had accomplished nearly all that a man can do in this world. Now, our meeting concerns the career of a young man, who has struggled in every way to avert his sad fate, but unsuccessfully.

"If he had any faults, we do not want to recall them; he had enough of virtues to endear him to every one who knew him. I remember him as a student of the Miami Medical College. He had a respectful and confiding manner in his relation to his teachers, and his amiable ways made him a favorite with both students and professors. He was quick to learn, a faithful student, and made rapid progress in his studies. After graduation he speedily gained a considerable practice.

"When the war came on, he volunteered at once in the medical staff, and rose rapidly to distinction, becoming a great favorite with General Rosecrans. Though slight in form, and of an amiable, soft, almost girlish face, yet he was possessed of a strong will, and unfaltering, daring courage. He gave himself to his work with intense enthusiasm—an enthusiasm not inspired by the shouts of combatants and the roar of battle, but that which is aroused by the appalling carnage of the field, and the cries of the wounded and dying. To save, and not to kill, was his mission; hence he

followed destruction through the thickest of the fire, not to aid her work, but to staunch the wounds she made.

"In this patriotic and humane work, and by all of its privations and exposures, he received the blow that has eventually laid him out dead in this early period of his life.

"The gloom that rests upon his household, the grief of his dear old father—our brother, too—I shall not seek to fathom, or to even penetrate. We will let them know by our resolutions that, so far as our sympathies and grief may share with theirs, they are freely poured out over his grave.

"Dr. Bonner promised much in our profession; he was quick in perception, and bold to execute. He would have taken high rank as a surgeon, had disease not shackled his willing powers. His pious training, his reverence and veneration for Almighty God, assures us to say that he now dwells in peace."

Dr. Wm. H. Taylor, Dr. W. T. Brown, Dr. Murphy, Dr. Kearney, Dr. Minor, and Dr. Quinn, all spoke feelingly of their knowledge of the deceased.

On motion, a committee was appointed to draw up resolutions expressive of the sense of the meeting, consisting of Drs. W. T. Brown, T. C. Minor, J. J. Quinn, W. H. Taylor, Thomas H. Kearney, and J. A. Murphy. The committee reported the following, which were unanimously adopted :

"WHEREAS, It has pleased an All-wise Providence to remove from us by death our highly esteemed friend and fellow-practitioner, Dr. S. P. Bonner; and,

"WHEREAS, We, his associates, deem it a duty to give an expression to our sentiments in relation to this afflicting dispensation; therefore,

"*Resolved*, That in the death of Dr. Bonner the profession loses a good physician and surgeon, and society one of its brightest ornaments.

"*Resolved*, That we will gratefully cherish the memory of our deceased brother.

"*Resolved*, That we tender to the family of the deceased our heartfelt sympathy; that a copy of these resolutions be sent them, and that they be published in the daily papers and medical journals of our city."

At a meeting of the Knox County Medical Society, held at Mt. Vernon, December 18, 1874, the following resolutions were adopted :

"WHEREAS, An All-wise Providence has seen fit to remove by death our friend and brother in the profession, Harvey W. Smith, M.D. ; therefore,

"Resolved, That, in the decease of our brother, the profession has lost an earnest, efficient, and valuable member ; his family a kind husband and affectionate father, and this community a worthy citizen and honorable Christian gentleman.

"Resolved, That we, as a society, extend an expression of our sympathy to the widow and children of the deceased, and that a copy of these resolutions be sent to them.

"Resolved, That a copy of these resolutions be sent to the Cincinnati LANCET AND OBSERVER, and each of the county papers.

"S. B. POTTER, *President*.

"ISAAC W. RUSSELL, *Secretary*."

Non-impulsiveness of North American Indians.—The fundamental trait of impulsiveness, though one to be looked for as universal among inferior races, is not everywhere conspicuous. Taken in the mass, the aborigines of the New World seem impassive in comparison with those of the Old World ; some of them, indeed, exceeding the civilized people of Europe in ability to control their emotions. Through stories, most peoples have been made familiar with this trait of the North American Indians ; and the statement of recent travelers confirm those of older ones. The Dakotas are said to suffer with patience both physical and moral pains. The Creeks display "phlegmatic coldness and indifference." So, too, with various native peoples of South America. According to Burnand, the Guiana Indian, though "strong in his affections," will lose his dearest relations, as he bears excruciating pains, with "apparent stoical insensibility ;" and Humboldt speaks of his "resignation." So, too, of the Uaupes : Wallace comments on "the apathy of the Indian, who scarcely ever exhibits any feelings of regret on parting or of pleasure on his return." And that a character of this kind was wide-spread, seems implied by testimonies respecting the ancient semi-civilized peoples of America, who were not impulsive.—HERBERT SPENCER, in *Popular Science Monthly for January*.

Reviews and Notices.

Clinical Lectures on Diseases of the Urinary Organs. Delivered at University College Hospital. By Sir HENRY THOMPSON. Second American from the third revised English edition. With illustrations. Philadelphia: Henry C. Lea, Publisher. For sale by Robert Clarke & Co.

These lectures originally appeared in the London *Lancet*, and were afterward revised and made more complete, as published in this edition of the book, giving the latest discoveries in the pathology of the diseases of the urinary organs, with the modifications that have been made in the plan of treatment.

The first lecture is devoted to diagnosis, which the author arrives at by asking the patient four leading questions, viz: "*First.* Is there any, and, if any, what frequency in passing water? *Second.* Ask whether there is pain on passing urine, and whether *before* or *after*, or *during* micturition, or at other times, and if produced or aggravated by quick movements of the body? The locality of the pain is to be ascertained. *Third.* Is the character of the urine altered in appearance; or is there anything unusual in the stream itself? Is the urine turbid or clear? *Fourth.* Has blood been passed in any way?" The use of the endoscope is explained. On the subject of stricture, he gives the following as his definition of spasmodic stricture: "It is an exceedingly useful excuse for the failure of instruments. It is a refuge for incompetence." He does not think the surgeon ought ever to fail in passing the instrument on account of spasm. The last obstacle is met at the neck of the bladder, and there is sometimes difficulty in passing through it, "but there is no such thing as stricture of the neck of the bladder. There never was a stricture even in the prostatic portion." A flexible instrument is preferred to the solid. Stress is laid on what we long since considered an axiom in cases of stricture. "*Under no circumstances whatever should force be used in the introduction of an instrument through a stricture or into the bladder.*" The whole subject of stricture is fully discussed, occupying three lectures. The frequency of enlarged prostate, at the age of fifty-five, he thinks greatly exaggerated, and he has never met with a case at fifty-four. The

usual time at which it begins to show itself is from fifty-seven to sixty; has examined men at ninety (90) without the slightest enlargement. "*Involuntary micturition indicates retention, and not incontinence.*" There are few exceptions to this rule. The operations of lithotomy and lithotrity are given in full, with histories of the operations. Lecture eleven is on the early history of calculus. Cystitis and prostatitis also have a lecture devoted to their consideration. The style of the author is exceedingly clear, and the minutiae of his operations are explained with the utmost care, making the work a really valuable addition to medical literature.

A Guide to the Practical Examination of Urine. For the use of Students and Physicians. By JAMES TYSON, M.D. With a plate and numerous illustrations. Philadelphia: Lindsay & Blackiston, Publishers. For sale by Robert Clarke & Co. Price \$1.50.

There are several really valuable works on the urine and its examination, but none that seems to us so well suited to the wants of the student as this brochure by Dr. Tyson. There is a completeness of illustration that is not usually found in small books of this character. The modes of approximate estimation, commonly used in German laboratories, we believe are published in the English language here for the first time. The book is tersely written, and is just what the practitioner or student needs to enable him to make his urinary tests complete, and with the least possible amount of time and trouble. A complete table of the apparatus and reagents required for qualitative and approximate analysis is given.

Specific Diagnosis. A Study of Disease, with Special Reference to the Administration of Remedies. By JOHN M. SCUDDER, M.D. Cincinnati: Wilstach, Baldwin & Co.

Dr. Scudder is the most voluminous author of the Eclectic school. His books always contain much that is good and well worth reading, and remembering after being read. This volume, it seems to us, is misnamed. It should have been, "*A Study of Diagnosis;*" for that is what it really is, being especially adapted for the use of students, as it is not complete or elaborate enough for the practitioner of medicine. The author believes in the definite and uniform action of remedies, and "that like causes always produce like effects." In which, it is hardly necessary to state that we think the author will, in some cases, have some difficulty in explaining; as, for instance, in the use of opium. In one case it acts kindly, and in

another precisely similar, so far as we can see, wakefulness and extreme excitability are produced by the drug. Quinia, we believe, comes as near being a specific remedy for ague as any medicine in the materia medica, and yet we know that it will not cure every case. The mechanical part of the work is no credit to the house that issues it. The binding, paper, and altogether, is of a cheap character, and not in accordance with our idea of the fitness of things, in the shape of a medical book.

An Account of the Epidemic of Cholera during the Summer of 1873, in Eighteen Counties of the State of Kentucky. By ELY McCLELLAN, M.D., U.S.A. Reprinted from Vol. I. Public Health Papers of American Public Health Association.

This is a valuable contribution to the history of cholera as it prevailed in this country during 1873, showing conclusively the portability of the cholera poison, and its method of propagation.

The Medical Use of Alcohol, and Stimulants for Women. By JAMES EDMUNDS, M.D. New York: National Temperance Society and Publication House. Price 60 cents.

This little book consists of three lectures, lately delivered in New York by Dr. Edmunds, of London. The lecturer has had unusual facilities for observing the medical uses, as well as abuses, of that potent agent, alcohol, having been senior physician to the British Lying-in Hospital, and senior physician to the London Temperance Hospital. The lectures are of a popular character, and give full information as to the physiological effect of the use of alcoholic beverages, showing that when taken into the system they diminish the temperature, lessen the strength, and where the use is continued, shorten human life; showing its relation to food, that it wastes the stock of vitality, and correspondingly affects the offspring of drinkers. His advice to nursing mothers, as to the kind of food they should eat, and what they should drink, is summed up in the one article—drink milk, drink it warmed, flavored with tea, thickened with oat-meal gruel, and eat less flesh food and abstain from alcoholic stimulants. We regard the advice as sound, as there is entirely too great a tendency on the part of physicians to advise beer, ale, and wine to nursing mothers, and that often to the injury of mother and child. And too frequently do we hear of mothers ordering the above stimulants, because a neighbor's physician had advised wine or beer under what she may have

thought similar circumstances. Physicians receive a share of criticism at the hands of the lecturer, for prescribing stimulants in order to gratify the notion or fancy of the patient.

The book is well worth reading, and we hope will have a wide circulation.

Infant Diet. By A. JACOBI, M.D. Revised, enlarged, and adapted to popular Use, by MARY PUTNAM JACOBI, M.D. New York: G. P. Putnam's Sons. For sale by Geo. E. Stevens & Co. Price 75 cents.

This little volume contains a considerable amount of information that should be possessed by mothers, and those having the care of young children. On page 14 we find the following statement, which is certainly contrary to general experience, and we think extremely rare: "Indeed, it is not absolutely rare to find women menstruating, nursing, and pregnant all at the same time." The mechanism of nursing and of the milk supply is given with care and minuteness, with the reasons why some infants are unable to nurse at the breast, and in other cases why the mother should not nurse her own child. We are glad to find the statement that "many cases of sore mouth, in bottle-fed babies, are due to the excess of sugar added to their food," as undoubtedly this cause is frequently overlooked. The sugar being liable to ferment in the alimentary canal, especially in the mouth, causes irritation of the mucous membrane. The physiology of digestion is detailed; reasons are given why nursing mothers should not only not abstain from eating acids and fruits, lest they cause their milk to ferment more easily, but the contrary effect ensues, and they should eat liberally of fruits in order to receive the laxative effect they produce in the bowels, as all diet that has a tendency to produce constipation of the mother should be avoided.

We are somewhat surprised at finding, under the head of "About Nursing Babies," that in hot weather a few drops of whisky are to be mixed with either the food or water that is given to a healthy infant, "the whisky not to exceed a teaspoonful in twenty-four hours." Whisky is a good thing in its place, but we certainly do not believe that it has or should have any place in the diet of a healthy infant. There is no physiological reason or common sense in such a procedure, and we enter our protest against it.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. VON ZIEMSEN, Professor of Clinical Medicine, in Munich, Bavaria, Vol. I. Acute Infectious Diseases. By Prof. LIEBERMEISTER of Tübingen; Prof. LEBERT, of Breslau; Dr. HAENISCH, of Grufswald; Prof. HEUBNER, of Leipzig, and Dr. OERTEL, of Munich. ALBERT H. BUCK, editor of American edition, assisted by a corps of competent translators. New York: Wm. Wood & Co., Publishers.

It is no exaggeration to say that this is the beginning of what is really the greatest literary work ever published solely in the interests of the practice of medicine. The present state of medical knowledge in the departments of etiology, pathology, and treatment are presented in the fullest and most complete manner, and that without unnecessary verbiage. Each particular subject is treated of by a physician of eminence, who has made special studies of that class of diseases. We can not but think that this work will exercise a considerable influence in setting at rest for some time to come very many theories as to the etiology of various diseases. Liebermeister, in his introduction to infectious diseases, declares his belief in the contagium vivum theory as to the manner in which this class of affections are spread and by that means become epidemic—a theory that to-day has the support of a large number of the more careful experimenters. The fact is unquestioned that the poisons of infectious diseases can reproduce themselves, and to an unlimited extent.

The same writer, on the subject of typhoid fever, states what he has frequently observed, that there is much unnecessary confusion among physicians as to the relationship between typhoid and typhus fever. We have heard a teacher of medicine in this city state that they were one and the same disease. Having witnessed an epidemic of typhus we took occasion to differ, but the old saw came in. "A man convinced against his will," etc. Liebermeister says: "The real fundamental difference between the two diseases is this: Typhus fever is a purely contagious disease; typhoid fever belongs to the miasmatic-contagious diseases. Typhus can be transmitted directly from person to person; its contagion is as intense and evident as is that of the acute exanthemata. Typhoid fever, on the contrary, is never transmitted from person to person. There can be no doubt that this profound difference in the mode of propagation depends upon an essential difference in the poison producing the two diseases. Every classification, therefore, which is grounded on scientific principles, must separate these two diseases

widely from each other." The subject of typhoid fever occupies about one-third of the volume, and as it is a disease of very frequent occurrence in both city and country, in all parts of our land, gives this volume a special value. The subject of typhus fever and relapsing fever—diseases which prevail almost altogether in cities, where the population is crowded, illy fed and clothed, and compelled to inhale a noxious atmosphere a large part of the time—is treated by Prof. Lebert. Asiatic cholera also comes within his special field, giving the full and complete literature of the subject, expressing his belief in a single ultimate cause of the disease: "A cholera germ,"—adopting what is known as the mycetic theory, which ascribes the origin and development of cholera to parasites of the lowest form and smallest size, as it corresponds more fully than any other hypothesis, and is in more perfect harmony with all observations hitherto made concerning the etiology of the disease. The author discusses the whole subject in a masterly way.

Liebermeister gives a complete history in all its parts of that most remarkable disease known as "The Plague,"—a disease that has swept from the face of the earth in a very short space of time the entire population of a number of cities, and which has been so terrible and appalling as to be described as the black death.

Yellow fever is treated by Dr. Haenisch, and dysentery by Prof. Heubner. This affection is so very common in all parts of this country that its complete history, etiology, pathology, and treatment is of special interest to all general practitioners. He adopts, as the cause of epidemic and endemic dysentery, a miasma which is developed under the influence of a tropical climate, or of one resembling a tropical climate, in a soil of a certain moist and perhaps swampy character, in an analogous way with malarial poisoning; *i. e.*, under conditions which exist in some parts of the tropics every year, in the temperate zones only from time to time.

Diphtheria is treated by Dr. Oertel, showing that it is one of the oldest epidemic diseases of the human race. Homer and Hyperates advanced views concerning it. Our author states, concerning the nature of the disease, that the diphtheritic membranes, the subjacent diseased parts, and even the blood, contain in great numbers vegetable organisms, or bacteria, to which he gives the name of micrococci. The disease establishes itself first in one spot, the focus of infection, and thence radiates, as it were, through the

body, until, by general blood-poisoning, it renders the organism incapable of life.

The publishers are presenting the work in a most creditable manner. The type is new and clear; the paper and binding excellent.

Outlines of the Science and Practice of Medicine. By WILLIAM AITKEN, M.D., F.R.S., etc. Philadelphia: J. B. Lippincott & Co., Publishers. For sale by Robert Clarke & Co.

This quarto volume of 580 pages is intended especially for the use of students. As a hand-book of the practice of medicine, it is very complete, quite up to the times, and comprehends much that is essential for the student to learn at the outset of his career. A very complete synopsis of the elementary facts regarding the natural history of diseases is given. We are particularly well pleased with the chapter on *case-taking*, which embraces the methodical examination of patients—a subject to which general practitioners should give more attention than is usual—giving explicit directions as to the method of recording cases in a case-book, and its value as a means of collecting statistics and for convenient reference in the future.

“The Nomenclature of Diseases,” drawn up by a joint committee appointed by the Royal College of Physicians of London (1869), is embraced in one of the chapters. The sanitary proceedings which are advisable to be taken in places attacked or threatened by epidemic diseases are fully described, which, at this time, when preventive medicine is occupying so much attention of not only the medical profession, but of the political economist, necessarily comes in for an important place in every work on the practice of medicine. And we are glad to see that so eminent a man as Dr. Aitken recognizes this fact in this his latest work. On general principles, we are opposed to the use of hand-books by students; but if they are determined to invest their money in that direction, we know of none better than this by Dr. Aitken. In the mechanical part of the book, the uncut leaves are objectionable: they give the work a very untidy appearance, and make it more difficult to find places sought, besides being a receptacle for the dust and soot that is wont to accumulate on all uneven surfaces in our smoky city.

The Medical Register and Advertiser, JAMES I. HALE, M.D., Editor, is the latest new journal in the field for professional patronage. It will be published quarterly at Anna, Union county, Illinois. For prospectus of terms, etc., address James I. Hale, Anna, Illinois.

Orthopedia; or, A Practical Treatise on the Aberrations of the Human Form. By JAMES KNIGHT, M.D., Physician and Surgeon in charge of the Hospital of the New York Society for the Relief of the Ruptured and Crippled, etc. New York: G. P. Putnam's Sons, Publishers. For sale by Robert Clarke & Co. Price \$4.00.

Nearly every physician in general practice sees and is called upon to treat a greater or less number of the human family that are physically deformed. In order that he may add to his knowledge and skill in such matters, we know of no better consultant than this monograph by Dr. Knight. It is eminently practical, and gives evidence that the author is master of his subject and thoroughly familiar with his specialty. The chapters on talipes and infantile paralysis are exhaustive. The author clearly shows that nearly all cases suffering from these affections may be greatly relieved, if not entirely cured.

The work is gotten up in a manner that is creditable alike to the author and publishers.

Fifth Annual Report of the Secretary of State of the State of Michigan, relating to the Registry and Return of Births, Marriages, and Deaths, for the year 1871.

This volume, for it is a book of 376 pages, was prepared under the immediate supervision of Dr. H. B. Baker, the very efficient secretary of the State Board of Health and superintendent of vital statistics. The report is a practical demonstration of what can and what ought to be accomplished in every State in the Union. As a book of reference as to vital statistics it is invaluable. We have a profound admiration for the practical interest in this subject shown by the medical profession of our sister State, and hope her legislators may ever have the wisdom to co-operate with them in the good work.

A Sketch of the early History of Anatomy. An Introductory Lecture at the School of Anatomy, Philadelphia. By WILLIAM W. KEEN, M.D. J. B. Lippincott & Co., Publishers. For sale by Robert Clarke & Co.

This lecture embraces so much, that the wonder to us is how Professor Keen managed to deliver it to his class at one time. The lecture gives, in terse English, just what its title indicates, together with incidents connected with the early anatomists.

We are in receipt of the *Annual Report of the Surgeon-General of the United States Army*, and the petition of the American Medical Association in behalf of the medical corps of the army, with a brief statement of the facts in the case.

THE CINCINNATI
LANCET AND OBSERVER.

J. C. CULBERTSON, M.D., Editor.

VOL. XVIII.—FEBRUARY, 1875—No. 2.

Dr. Neave

Original Communications.

Art. 1.—Opium Poisoning—Is Atropia of any Value in the Treatment?

By JAS. L. NEAVE, M.D., Cincinnati, Ohio.

The article by Dr. Wm. H. Taylor, in the January number of the LANCET, headed "A Case of Morphia-atropia Poisoning, with an Inquiry as to the Antagonism of the two Substances in Toxic Doses," recalls several cases of opium-poisoning that I have had the opportunity of observing, and also my ever-increasing doubts as to the antagonistic properties of the two alkaloids.

I was taught to believe that in *atropia* we held an almost certain antidote for opium-poisoning, and entered the Cincinnati Hospital as interne, in 1872, fully impressed with the idea that in this drug we possessed an almost infallible weapon with which to combat this dreaded narcosis, and only anxious for a case, that I might demonstrate, at least to my own satisfaction, what great things modern medicine was capable of, and how far ahead we of the present day are of the men of olden time, who seemed to hold opium-poisoning in such dread.

The first case that I saw, although not under my immediate con-

trol, still gave me ample opportunity for watching the remedial effects of this wonderful antidote, atropia. The patient—an old, debilitated man, suffering from a very severe attack of diarrhea, added to exposure, neglect, etc.—was narcotized by the too free administration of Dover's powder, through a misunderstanding of orders on the part of the ward attendant. Without remembering the particulars of the case, I can only say, at the present time, that after a couple of hypodermic injections of atrop. sulph. gr. $\frac{1}{90}$ each time, given about twenty minutes apart, the pupils dilated widely, without in the slightest diminishing the symptoms of narcosis; respiration, pulse, everything remaining unchanged. The patient died, let us charitably suppose, on account of his general broken-down condition. The treatment had nothing at all to do with the result. Even trotting him, in his exhausted condition, several times up and down the long ward, had nothing to do with his demise. If he had not strength sufficient to stand the line of treatment we had been so carefully taught while at college, to make use of, that was not our fault. We had nothing to do with that; but we were bound to cure him of his narcosis. We are all older now. The result in this case did not in the least weaken my faith in the great antidote, neither did it tend to increase it any; but I comforted myself with the reflection that the patient was not a favorable case for demonstration, and that next time there would be better success.

The second case occurred under my own immediate supervision; and, being a much more favorable subject, I had ample opportunity for testing the antidotal powers of atropia. I must acknowledge that my faith, if not completely broken, was at least reduced to a very small minimum. The case occurred in the lying-in ward of the Commercial Hospital, and was as follows:

Mary F., æt. 25; multipara, and no trouble during previous confinement; large, heavy set, fleshy woman. Was admitted September 20, 1873. Previous to entering she had been drinking excessively, and has had considerable gastric irritation for a week past, with acid eructations, nausea, and vomiting. This state of affairs continued for a week after she came into the ward, but was finally controlled. With the exception of a similar attack, occurring four months ago, she had been perfectly healthy during gestation. Perhaps it may be worth while to mention that she appeared very despondent, being convinced that she was never to leave the ward

alive. Whether this had any influence on the final result, I leave it for others to decide.

October 5. After an easy labor of sixteen hours' duration, she was delivered of a female child weighing but five pounds. The pains were at no time severe, and seemed simply a source of annoyance rather than causing her any amount of suffering. They were short, not severe, and with considerable interval between. The character of the labor may be inferred when it is taken into consideration that the pelvis was large and roomy; the vagina capacious, soft, moist, and exceedingly distensible, and all the soft structures were relaxed. With all these favorable conditions, added to the very small size of the child, the second stage lasted more than two hours. The placenta, being well drawn down into the vagina, was removed in a few minutes; and the uterus contracted down tolerably firmly, but almost immediately relaxed, allowing very free hemorrhage. The os gaped widely open, in extent much larger than a silver dollar, readily permitting the introduction of the hand into the uterine cavity. This was immediately done, but the contraction resulting was only partial and temporary. Ice being close at hand, several large pieces were next introduced into the uterus, checking the hemorrhage and causing a contraction that seemed limited to the fundus and upper half of the body, but leaving the lower half and the os still relaxed. This was only temporary relief; the hemorrhage returned and was slowly gaining, and it soon became very evident that the presence of the hand and the ice in the interior, assisted by vigorous kneading externally, simply postponed for a few minutes what promised to be a fatal issue. As a last resort used the following: \mathcal{R} Ferri persulph. \mathfrak{zj} ; aqua destil. \mathfrak{zj} . This was thrown into the uterine cavity, and the contractions following were speedy and permanent, completely checking the hemorrhage. It would be difficult to estimate the amount of blood lost; all that can be said is that the bedding and mattress were saturated, and there were large amounts of clots in the depression formed by the patient's hips. There was no pallor either of face or prolabia; but the pulse was extremely feeble, and the patient complained of a feeling of extreme weakness and drowsiness; indeed, it seemed difficult to arouse her sufficiently to pay the least attention to what was said to her. She vomited once, soon after being returned to the ward.

P. M. Patient constantly vomiting a greenish, watery fluid. Is very restless; not lying in any one position longer than a few

minutes, and manifesting a desire to throw off all covering. At the same time is extremely listless; manifesting an extreme disinclination to answer questions, and only in a whisper, if at all. Pulse 99, very feeble.

About 7 p. m., the attending physician, coming through the ward and finding her still restless and vomiting, ordered an enema of starch water, \mathfrak{z} ij, containing tr. opii, \mathfrak{z} jss. (between six and seven grains of opium.)

At 11 p. m. noticed the patient was breathing rather heavily, but paid no attention to it, further than to order that she be thoroughly aroused every few minutes.

October 6. At 4 a. m. was called to the ward, and told by the nurse that for some time she had been unable to arouse the patient. Upon approaching the bed I found her lying perfectly comatose; pupils contracted down to the size of a small pin-head; breathing exceedingly heavy; respirations 4; pulse 102. Immediately gave a hypodermic injection of quin. sulph. grs. $\frac{1}{4}$; also one of atropia sulph. gr. $\frac{1}{5}$.

4:20 a. m. No change; no effect on pupil. Pulse 129. Repeated the injection of atropia, gr. $\frac{1}{10}$.

4:50 a. m. In *statu quo*. Pulse 138. Repeated the atropia, gr. $\frac{1}{10}$.

5:15 a. m. Pupil has responded very slightly. Pulse 151, not so much force as previously; respirations 5. Repeated the atropia, gr. $\frac{1}{10}$.

5:45 a. m. Can not in the least arouse her. Pulse 135, growing weaker; respirations 5. Repeated atropia, gr. $\frac{1}{10}$.

6:05 a. m. No change perceptible. Repeated atropia, gr. $\frac{1}{10}$.

6:15 a. m. Pupils responding; but other than this there is no change, excepting that the patient is gradually sinking. Pulse still growing weaker. Repeated the injection of quin. sulph. grs. $\frac{1}{4}$. Repeated the injection of atropia, gr. $\frac{1}{10}$.

8 a. m. Have not given the atropia since the last note. The pupils have responded well at last, and are freely dilated; still there is but little, if any, general improvement, certainly no more than would naturally be expected from the gradual wearing out of the opium poisoning. Pulse 120, very feeble; respirations 6. Tried to get her to swallow a little coffee, but failed. Ordered \mathfrak{z} ij strong infusion of coffee thrown up the rectum.

9 a. m. No improvement; steadily failing. Respirations 6, and becoming shallow; pulse very feeble.

10 A. M. Applied the interrupted current along the spine. Used the full strength of the two-cell Drescher battery, with the induced current. Could make no impression whatever for at least five minutes, when slight muscular contractions commenced, and the patient soon began to manifest symptoms of pain. Placed one electrode over the zypoid cartilage, allowing the other to play along the spine, and soon had the patient taking full, deep breaths, and giving evidences of acute sensibility. Continued the application for fifteen minutes. When discontinued, the pulse 126, stronger than had been for some time; respirations about 9.

1:30 P. M. Patiently markedly better; has swallowed a small amount of beef essence. Pupils nearly normal, and respond to the influence of light. Can be aroused after considerable difficulty. Reapplied the battery, and found the nervous irritability very much increased. Used but one cell without the induced current, and with the coil only about two-thirds out, and yet the patient felt it acutely; she complained bitterly of it, and wished to be let alone. Recognized the nurse, and could readily be aroused for a moment by the stimulus of the battery; but would immediately relapse into her listless state. Pulse 120, fair; respirations 13. In the early part of the afternoon she was able to converse a little, but the improvement lasted but a short time.

About 5 P. M. she was partially delirious, recognizing a person at one moment and wandering the next. Could be aroused for a moment, and then would relapse into a dull, lethargic condition. Pulse 129, rather feeble; respirations 13, irregular; thermometer 103°.

9 P. M. Pulse almost imperceptible; respirations about 16, regular but very shallow. Could not arouse her in the least. Sensation very dull. There was no rallying after this. Patient gradually became worse until 12 o'clock, when she died.

The third case was a morphia suicide case, and the final result at least was similar to those preceding. It was stated that the woman had purchased a bottle of morph. sulph. through the kind offices of a friend, and had taken the entire contents (3j). Certain it is the bottle was purchased that evening, and was found empty, along with a glass containing, as afterward ascertained, about $\frac{1}{4}$ gr. morph. sulph. partially dissolved. The case was not seen until after several hours had elapsed, and she was then profoundly narcotized. It was utterly impossible to arouse her in the slightest degree, or to excite deglutition; sensation appeared to be entirely

breathing stertorous; respirations 4; pulse 130; pupils contracted to a small point. The case was evidently hopeless from the start, but it was resolved to try the atropia again; not with much hope of accomplishing any good, it must be acknowledged. In brief, the only effect of four hypodermics of atropia of $\frac{1}{60}$ gr. each, given at intervals of twenty minutes, was to dilate the pupils. There was not the slightest improvement in any respect, the patient sinking steadily. She died in three hours from the time she was first seen.

Two of these cases, certainly, were not very favorable for testing the merits of any remedial agent; the same objection does not hold good in the one detailed in full. Certainly, had there been any antidotal properties of the atropia over the morphia, it could scarcely have failed to have been manifested here to some degree at least. In this case, more than $\frac{1}{4}$ gr. of atropia in the aggregate, was given at regular intervals by the hypodermic method, in $2\frac{1}{4}$ hours, and the only effect noticeable was dilatation of the pupils, the general condition remaining unchanged. This amount would certainly appear sufficient to demonstrate the beneficial effects of the remedy, did it possess any.

In every case the pupils were acted upon, and this one symptom of the toxic powers of opium overcome; but what did it amount to? So far as the relief of the patient was concerned, it failed utterly; and as far as so few cases can demonstrate a fact, it appears wholly useless as an antidote. Perhaps this limited experience does not justify me in condemning an agent that has been well spoken of by others, but I must confess to a complete loss of faith in its antagonistic properties. It does not even seem to possess the poor merit of displacing one poison and substituting another. Will some of its friends appear in its defense?

Art. 2.—A Case of Spina Bifida—Enormous Development of the Tumor.

By S. L. ENSMINGER, M.D., Crawfordsville, Ind. A paper read before the Alumni Association, Miami Medical College, Cincinnati, January 7, 1875.

The child was born in August, 1873, to Mr. and Mrs. W—, near Colfax, Clinton county, Ind.; a female—German descent. When

born, presented a tumor over the sacrum, a little more of it being on the right than the left of the median line. It was ovoid in shape and pedunculated, and was about the size of the child's head. The skin covering it was normal in appearance when the child was lying down; but when held in the vertical position, the tumor became enlarged and the skin tense and reddened. When the tumor was pressed upon, the child would cry out as if in pain. There was fluctuation, and it could be somewhat lessened by compression.

Dr. Labaree, the physician in charge, drew off with an aspirator the contained fluid, which was serous in character, of a straw color, and amounting to about two ounces. A mass remained, which was irregular in shape and apparently solid, and could not be further reduced on account of the pain the child experienced when the tumor was handled. In every other respect the child seemed normally developed. It ate and slept and grew as other children, and was rarely fretful.

It was nine months old when we first saw it. At that time the tumor was ovoid in shape, the greater end being dependent. The pedicle, or smaller end, measured eighteen inches, and the body, or larger end, twenty-three inches in circumference. Its attachment to the body of the child at that time extended upward as high as the last lumbar vertebra; downward, about to the point of the coccyx, and laterally about three inches on each side of the median line. The skin was normal in color and unaffected by position; the veins were large, full, and quite blue. Neither position nor compression effected any perceptible reduction in the size of the tumor. Compression gave the child pain. The tumor was elastic and quite tense, yielding but slightly on pressure.

The case was presented to Dr. Moses Baker, of Stockwell; Dr. J. S. McClelland, of Crawfordsville, and Dr. Henry Jameson, of Indianapolis, who unanimously favored non-interference. The child remained in its usual health until it was thirteen months old, when there was the first eruption of its teeth. Then there was the extraordinary occurrence of the eight incisors presenting simultaneously. The depression of the child's nervous system was very great. Indigestion, followed by colliquative discharges from its bowels, produced rapid emaciation and threatened its life. But that trouble was finally corrected sufficiently to arrest the discharges and prolong the life of the patient. But it never recovered its former vigor. Two weeks before its death, which occurred December 13, 1874, it began having convulsions, which continued

at irregular intervals, gradually growing worse, until death supervened. It died at the age of seventeen months.

On Monday, December 14th, at the request of Dr. Labaree, I made an autopsy. The tumor had become spherical, measuring thirty-four and one-half inches in circumference. The skin was normal in color, very tense and glossy, and at a point on the surface opposite the attachment of the tumor to the child, was an ulcer about two inches in diameter. The veins under the skin still presented the same corded appearance they had during life. The vulva and anus were displaced to the left and distorted. On posterior section, on median line, we found the walls of the tumor composed of alternate layers of fascia and areolar tissue, becoming thinner as we progressed with the incision from the body of the child. On cutting through the wall, a sanguine serous fluid escaped, the quantity of which amounted to five quarts or one hundred and sixty ounces. The inside of the tumor presented a mass of convolutions, projecting into its cavity from the parietes nearest the child, resembling in some respects those of the brain—being composed of a structure like the white substance of the brain, covered with a delicate membrane, and breaking down easily when pressed upon with the finger. They were adherent to the walls of the tumor, and most prominent at the attachment of the tumor to the child. There were stretched in various directions across the cavity, from wall to wall, delicate membranes, which we took to be serous in character. They were smooth, easily torn, and contained no prominent blood-vessels.

On separating the tumor from the child, after cutting through the integument, we found the tumor superimposed over the adjacent parts of the child—viz., the lower part of the back, the buttocks, perineum, and inner surfaces of the thighs about the upper third. It was easily separated from the thighs, perineum, buttocks, and greater portion of the back, as there was a layer of areolar tissue lying between it and the superficial fascia covering those parts. But the connection between it and the sacrum was more intimate, being tough, ligamentous tissue, which was continuous with its walls. There was a cleft in the posterior wall of the spinal canal in the sacrum, extending from the lower border of the arch of the first vertebra through the remainder of its course in the sacrum, and the full width of the canal. Its edges were irregular and cartilaginous, and directed outward from the spinal column into the wall of the tumor. This, together with ligamen-

tous structure, formed a canal from the spinal canal into the cavity of the tumor, and contained a mass of nerve tissue, resembling the white fibrous tissue of the cord or brain, which communicated with the cord and convoluted mass on the inside of the tumor.

What proportion of the cord was involved in the tumor we were unable to determine, its termination having been so thoroughly abnormal. We had no history of paralysis of the lower extremities. The child and tumor together weighed $29\frac{1}{2}$ pounds. After the child was separated from the tumor, its weight was 11 pounds, leaving the tumor weighing $17\frac{1}{2}$ pounds, or $6\frac{1}{2}$ pounds more than the child.

Art. 3.—Paracentesis Thoracis with Trocar and Canula.

By J. P. GREEN, M.D., Lawrenceburg, Ind., late Resident Physician at the Cincinnati Hospital.

N. R—, æt. 24; native of Indiana; caller by occupation; came under my notice July 30, 1872; had always enjoyed good health until in the previous April. After working in the water for several days was seized with severe rigors, which were soon succeeded by high fever and pain in left side, which was invariably aggravated by coughing or deep inspiration. These symptoms grew somewhat less urgent in a few days, but was sick and unable to be up for a month, and suffered from shortness of breath. His physician called the disease pneumonia. Soon after getting up noticed that his left side was "bulged out." He improved in strength very slowly, and has suffered ever since with the distressing dyspnoea; has not gained flesh, and indeed thinks he has been losing in that particular for two or three weeks. Has not done a day's work since first attacked, and can not ascend a single flight of stairs at his ordinary gait without stopping to rest.

Present condition: A young man of ordinary stature, apparently of fine physical development when in health; very much emaciated; appetite and digestion poor; pulse 108, small and hard; temperature 101° .

Physical examination of chest revealed all the evidences of a large quantity of fluid in the left pleural cavity. The side was almost motionless during respiration, and measured from the middle of sternum to spinous processes of vertebra two and one-half

inches more than the right. The intercostal spaces were flattened, and the apex impulse of the heart could be seen two inches to the right of the sternum. There was complete absence of vocal fremitus on palpation, and the vocal resonance was so much impaired as to be scarcely perceptible. There was absolute flatness to percussion over the entire side, and upon auscultation not the faintest respiratory sound could be heard, save over a very small space immediately beneath the clavicle, where some blowing sounds were audible.

He was placed upon tonics, diuretics, and the best of diet. Counter-irritation was applied to the affected side of the chest by painting with tincture iodine, and a part of the time by means of flying blisters, and this course was continued till the 23d of August (more than three weeks), without the slightest evidence of diminution of the quantity of fluid, and the general condition was growing perceptibly worse.

The case was evidently one for thoracentesis, and not having an aspirator (the instrument being at that time scarce and expensive), I decided to use the ordinary trocar and canula. Accordingly, on the 23d of August, I tapped the chest in the space between the eighth and ninth ribs opposite the angle of the scapula, using an instrument of similar size to the one usually employed in tapping a hydrocele. There were ninety-six ounces of greenish-colored albuminous serum withdrawn. Before making the puncture a small incision was made, the integument being drawn forcibly upward.

The canula was about four or five inches in length, and after the fluid was nearly exhausted, as shown by less forcible character of the stream, the extremity of the instrument was kept immersed in the fluid by inclining the body of the patient toward the vessel (a broad, shallow tin pan) in which it was received.

The admission of air into the cavity of the pleura was by this means nearly, if not entirely avoided. The incision was closed with adhesive plaster. The patient experienced no unpleasant sensation save a feeling of faintness, which soon passed off, and he felt quite well till the fifth day, when he alarmed me not a little by commencing to have fever every afternoon, which would generally be preceded by more or less severe rigors. It was a matter of impossibility to say whether he had been attacked by an intermittent or was suffering from hectic, the result of empyema. Considering the time of the year, and the fact that we were having a good deal of malarial disease, I was inclined toward the opinion that my

patient had the less serious of the two maladies. Before enough time had elapsed for the matter to be settled by the administration of quinine, he was removed by his mother to her home, some twenty miles down the river. At that time the lung had begun to expand slightly; no vesicular sound could be heard, but bronchial respiration was distinct as far down as the fourth rib, and the apex impulse of the heart was an inch nearer its natural position.

I heard nothing more of him for about a month, when I was very agreeably surprised by his walking into my office. The fever had subsided a day or two after he left, and since then he had been constantly improving. He had perceptibly gained in flesh, and the lung had expanded so much that there was bronchial respiration all over the chest, and in a place or two, notably at the base, posteriorly there was a rather exaggerated vesicular murmur. He was still improving some three weeks later, when he suddenly left the State to avoid arrest for sustaining the principal part in a shooting affair, as a matter of course omitting to settle his bill. I neither saw nor heard from him till some two months ago, when I met his brother, from whom I learned that he is and has been well ever since he left, has not been troubled with cough, and has regained his ordinary state of flesh.

This case is of interest in that its result tends to support an opinion I have been inclined to hold, that the mortality following thoracentesis is (or was, previous to the introduction of the aspirator) due to a great extent to the fact that the operation has been delayed till the patients have been well nigh exhausted from the disease, or until the fluid has become purulent. Hereafter, the aspirator will of course supersede all other contrivances for performing this operation; but, in its absence, it is an easy matter to prevent the ingress of air by the means employed in this instance. An improvement would be, as some one has recommended, to attach a piece of rubber tubing to the canula; but with an instrument as long as the one used in this case, it is by no means essential.

Art. 4.—Case of Paraphimosis.

By L. A. DAVIDSON, M.D., West Milford, Harrison Co., W. Va.

Called, April 15, 1874, to see Master G——, of Tyler county, West Virginia, æt. 3 years, who had been noticed by his parents four days previous having a retracted foreskin. This paraphimosis was allowed to continue unmolested, with the exception of the mother's application of olive-oil when first noticed. On the fourth day evening, the time of my only visit, there was great swelling and dryness from infiltration of serum in front of the stricture, the preputial ring having retracted close to root of the virgula, making almost the appearance of a very large button suspended by a pedicle, the integument almost hidden behind the œdematous prepuce and glands penis.

Reduction by irrigation upon the glands alone, the body protected by an inflated gum pessary.—After puncturing the prepuce and compressing the glands twenty minutes, without a hope of reduction, I placed a flaccid inflating India-rubber pessary, with a large central aperture, yet the aperture was too small to receive the head of the penis. Placing the central aperture of the pessary so a stream of cold water might fall only upon the glands covering and protecting the constricted part of the organ (by the pessary) from the contractile powers of the cold current, eight or ten gallons of aqua fontis being poured in a small but continuous stream, contracted the enlarged gland to one-third its abnormal size in about thirty minutes.

After removing the pessary, I used the gum-elastic tube, which is always an appendage of the inflating pessary, by bringing the ends of the tube down on either side of the root of the penis, which formed a compressible loop by its compression, and extension completed the reduction.

Hypothesis.—If I had placed no protection over the body of the organ, the parts would have similarly contracted, and the contractile astringent effect upon the preputial ring would have almost been equal to the sedative shrinking effect upon the erectile tissue.

Art. 5.—Scarlet Fever.

By J. J. QUINN, M.D., Health Officer, Cincinnati. A paper read before the Cincinnati Medical Society, upon the plan proposed by Prof. J. A. Murphy for stamping out Scarlet Fever.

MR. PRESIDENT:—The subject of scarlet fever has been one of much interest and no little anxiety to me during the whole of the past and part of the preceding year. Although it might not be right to hold sanitary officers responsible for the presence and fatality of epidemics in general, there is an opinion that boards of health, through efficient health officers, should be able to prevent the prevalence of some epidemics altogether, and greatly mitigate the severity of others. And this opinion is not without plausible reasons to support it. There is no doubt that many attacks of disease can be prevented by the proper enforcement of sanitary and hygienic measures. It is a fact, that cities visited by cholera in 1873, which had organized boards of health and employed sanitary means for its prevention, suffered less comparative mortality from the epidemic than places that resorted to no precautionary measures. Nashville made no preparation for its reception, and the disease claimed as many victims to the population as in any previous visitation. In Cincinnati, the streets and alleys had been pretty thoroughly cleaned before its appearance; the public had been warned of its approach in time to allay undue alarm, which has been regarded as a frequent approximate cause; the sanitary and hygienic rules, enjoined by the board of health, were pretty generally observed, and the disease was less general than in any former epidemic—the mortality, regardless of the great increase in population, being only about one-tenth that of the cholera of 1866.

The first fatal case of cholera occurred on the 14th of June, and the last on the 18th of October. During that period (four months), 207 deaths from the disease were reported. From the latter date to the first of the following January (the succeeding two and a half months), 272 deaths were reported from scarlet fever, or in the ratio of more than double the number that had occurred in the same length of time from cholera. The public was at least anxious about, if not fearful of cholera, but no public and little individual anxiety was manifested about scarlet fever. There were in the city during the year just past 687 deaths reported from scarlet fever, and excepting physicians and families afflicted or in immediate danger, there has been the same apparent indifference. And yet, in my opinion, almost certain immunity might have been secured against

an attack of the cholera of 1873, while no precaution seemed able to ward off one of scarlet fever in 1874.

A healthy constitution, good sanitary surroundings, well-ventilated sleeping apartments, wholesome diet, regular habits of life, and freedom from undue mental excitement, seemed to secure exemption from a fatal attack of cholera. But with scarlet fever it appeared different. It paid no attention to the healthfulness or vigor of its destined victim; had no regard for the cleanliness of his surroundings; was not diverted from its object by even the strictest observance of hygiene. It entered the luxurious and well-ventilated chamber of the affluent, as well as the dark, close, miserable home of the poor; seized upon the most hearty and robust child, as well as the delicate and effeminate; showed no more favors to those whose food was selected for its wholesomeness than to those whose nutriment was drawn from coarsest of meats and refuse of vegetables, obtained at cheap rates in late market-hours; was awed by no meteorological changes, but performed its work of destruction without regard to hot or cold, wet or dry, changeable or unchangeable weather, in densely populated districts and in sparsely settled neighborhoods, even in what might be called the country parts of the city. Cholera entered a house, and with eleven exceptions in the whole city, left with only one victim; scarlet fever entered a dwelling often to seize upon all the members of the family who had not been previously affected with the disease.

The question of "how to stamp out scarlet fever," must therefore have to me a double interest—an interest as a physician desirous of knowing what to recommend as preventive or prophylactic measures, and an interest as a sanitary officer with power to enforce some at least of the measures that might be found efficacious to that end. This interest I communicated during the past year to a number of my medical brethren, my friend, Dr. Murphy, among them, soliciting suggestions that might enable me to arrest the progress of the disease. The answers were always unsatisfactory to them as well as myself. I am glad, therefore, that the question of how to arrest the progress of scarlet fever has been presented to the Society. We have heard of epidemics being "stamped out," but in all instances of the kind that have come to my knowledge, it has appeared to me that the disease was stamped out just when the epidemic had expended its force, and was about stamping itself out. It would be very desirable that the plan suggested in the paper would form an exception to this. Although we have an

almost infallible prophylactic against small-pox, yet we do not often find an epidemic of the disease soon "stamped out." In the epidemic of small-pox which commenced in this city in December, 1868, the disease was not stamped out until 871 deaths from it had occurred, and even after that, fatal cases were reported in every month except one, until October, 1871. when the disease again became epidemic. The mortality from small-pox in this city in the years 1871 and 1872 was 1,853, although every means known to science was resorted to by predecessor to arrest its progress, even to indirect compulsory vaccination, for no child could enter a public school without the evidence of vaccination. The epidemic appeared to be stamped out when its force had become exhausted, or when the material for prey gave out.

The plan proposed by the essayist for "stamping out" scarlet fever is: 1. To remove all patients from tenement houses, and other unwholesome apartments, to hospitals beyond the city limits, destroy the clothing, and fumigate the rooms with sulphur; 2. To place cases occurring in private residences among the more comfortably circumstanced, in the upper stories, in rooms well ventilated, and indicate the dangerous locality by a flag. Now, could these means be carried into effect? And if so, would they accomplish the object desired?

In this city, no law, even if enacted, could be enforced, that would take the sick children of the poor from the arms of their mothers, while it permitted those of the wealthy to receive the personal care and attention of relatives in their own homes. I regard this part of the plan, therefore, as practically impossible.

But if it were possible, would it accomplish the object? In the first place, why would you take scarlet-fever patients from tenement houses and leave those in private dwellings? It must be either to secure for tenement patients a better chance for recovery, or to suppress (stamp out) the affected tenement as a nucleus, or center for the spread of the disease, or perhaps for both these objects. Would the patient really have a better chance for recovery by removal to the country? Or might not the advantages of the purer country air be counterbalanced by the exposure and fatigue consequent upon removal, and the more concentrated vitiated atmosphere of the hospital ward? I believe that small-pox has been more fatal in the Rho's Hill hospital (the branch of the Cincinnati Hospital for the treatment of contagious diseases), than it was in the old pest-house in the Commercial Hospital yard.

This, at least, was the case during my connection with the hospital as trustee, and it could only be attributed to the effect of the jolting and exposure of the patients during the long conveyance necessary to reach the branch hospital. What statistical evidence have we that a tenement is more fatal to a scarlet-fever patient, or more dangerous as a center for the propagation of the disease, than a private residence?

It is probable that at least three-fourths of all the buildings in the city used as dwellings, are tenement houses, or are occupied by more than one family. And this is about the proportion of deaths from scarlet fever in each class to the total mortality. From January 1, 1874, to January 1, 1875, the total deaths from scarlet fever, as already stated, were 687, of which 486 occurred in tenement houses, 157 in private residences, 4 in public institutions, and 40 in houses not found or examined by the inspector. This shows that of 643 deaths which occurred in houses that have been examined, 3 less than one-fourth, or 24.41 per cent., took place in private houses. What is true of the whole year in this respect is true of any fraction of it. In February, March, April, May, October, and December, 12 more than one-fourth, and in January, June, July, August, September, and November, 14 less than one-fourth of the deaths from scarlet fever occurred in private dwellings. During the first three months of the year, when the mortality from the disease was greatest (exclusive of 24 which occurred in houses not found or examined), there were 244 deaths from scarlet fever, of which 175, or 71.72 per cent., took place in tenement, and 69, or 28.28 per cent., in private houses. Excluding one death in a public institution, and three in houses not examined, there were 163 deaths from the disease in April, May, and June, of which 123, or 75.40 per cent., occurred in tenements, and 40, or 24.60 per cent., took place in private residences. During the third quarter of the year, there were, besides two deaths in public institutions, and six in houses not examined, 132 deaths from scarlet fever. Of these, 23, or 17.42 per cent., occurred in houses occupied by private families, and 109, or 82.58 per cent., in tenements. In this quarter, or rather in the two last months of it, August and September, the deaths in private residences were comparatively few. In the last quarter of the year, the deaths from scarlet fever, excluding one in a public institution, and seven in dwellings not found or examined, were 104. Of these, 79, or 75.96 per cent., took place in tenement, and 25, or 24.04 per cent., in private houses. 570 houses, in which 643 deaths

from scarlet fever occurred during the year 1874, have been examined. Of these houses, 136, or 6 less than one-fourth, were private residences. Of the deaths, as already remarked, 157, or 3 less than one-fourth, took place in dwellings occupied by single families. The deaths in private residences were 1.15 to a house; the deaths in tenements were 1.11 to a house.

How does the ratio of deaths to the respective population of the two classes of buildings compare? The tenement houses in which 486 deaths from scarlet fever occurred during the year, 434 in number, contained 8,896 inhabitants, and had therefore 1 death from the disease to every 18.05 occupants, or 5.46 in every hundred. The 136 private residences which had 157 deaths from the disease, were occupied by 784 persons, and had therefore one death in every 5.76, or 17.34 to every hundred occupants. If we take the number of persons belonging to the tenement families in which deaths from scarlet fever took place, and not the total population of the houses in which they occurred, we find the 486 deaths in tenements to have taken place in families composed, in the aggregate, of 1,942 members, and the deaths to have been 1 in every 4.01, or 25.02 in a hundred. Here is a difference in favor of private residences; but some of the difference could no doubt be accounted for by the fact that there are generally more children subject to attacks of scarlet fever in families of the poor, than in those of the wealthy.

If the assumption that three-fourths of the dwellings in this city are tenements be correct, these facts show little difference in the proportion of deaths from scarlet fever in tenement and private houses. They furnish, therefore, little ground for discriminating against tenements, in the process of "stamping out" scarlet fever.

These figures will perhaps surprise you, as they certainly have me; but they are the results of examinations by an intelligent corps of sanitary officers, and I have no reason to doubt their general correctness. The proportion of tenement and private houses is based upon an estimate, and it may be that an actual enumeration of the two classes of dwellings, which is now being made, under my direction, will change the estimate, and consequently the deductions from it.

Is there more danger in an infected tenement house as a center for the spread of scarlet fever than in an infected private house? This is perhaps difficult to determine, as a new case might as read-

ily be traced to one as the other. But I know of an instance in which a private residence seemed to be the point of diffusion. A lady, living in the western part of Covington, had three children, whom she was very careful in keeping from Cincinnati, or any neighborhood where they would be exposed to scarlet fever. Last summer, she, with her children, visited friends in the southern part of Kentucky, and was absent about seven weeks. She returned by boat to Evansville, and thence by rail to her home. On the cars, between Evansville and Louisville, her eldest child, aged 6 years, was taken with scarlet fever. Neither of the other two children subsequently contracted the disease; but although all communication between the sick child and the children in the neighborhood had been guarded against, scarlet fever soon broke out a few houses distant, and spread through the neighborhood. This child had all the care and seclusion recommended in the paper, and the neighborhood all the protection except the flag. In place of this, however, neighbors were informed and warned of the danger, which is about all that could be accomplished by the display of a flag. This would go to show that a private house infected from the disease is as dangerous as a tenement, and should receive the same treatment.

If, then, you remove patients from tenement houses only, you simply remove, or attempt to remove, some centers from which the disease might spread, and leave others to nurture and distribute it throughout the city. But would you really remove any center? Will the destruction of the clothes, and the fumigation of the rooms with sulphur, destroy the germs? What proof have we that burning the clothes is any better than washing them in boiling water? If 212° of heat will not destroy the poison in water, how do we know that the process of combustion would not liberate, instead of destroy, the greater part, if not the whole, of what might be contained in the clothing? Where is the evidence that filling the room with sulphurous acid would do much more than displace the atmospheric air, without lessening the potency of the poison which it might contain? Sulphurous acid might receive an additional proportion of oxygen, be converted into sulphuric acid, and arrest the decomposition of animal particles remaining in the room; but would it destroy the germs of the disease? It decomposes sulphureted hydrogen, and also combines with ammonia; but are these the causes of scarlet fever? It is supposed to act on

organic matter, but if ammonia, for which it has a great affinity, is present, it may not do so.

The whole subject of disinfection, for the purpose of destroying the *germs* of disease, is experimental. We know that certain agents will arrest decomposition, and thus prevent the generation of exciting causes of disease, and that others, by chemical action, will neutralize and change the character of noxious and dangerous gases; but how do we know when specific germs are developed, disinfectants will destroy their power for mischief, or that they will, before their development, destroy, so to speak, their vitality? If we knew the nature of the contagion of scarlet fever, we might employ chemical agents for its destruction with some degree of certainty, but in the absence of such knowledge, they can only be employed experimentally. What reason have we to suppose that sulphurous acid would prove efficacious in destroying the germs of scarlet fever? We have in this city large quantities of smoke from the combustion of bituminous coal, constantly emitted from chimneys and stacks, stoves, grates, and fire-places. This contains sulphurous acid, besides tarry matter and free carbon, which are also disinfectants. Does any one suppose that this smoke has had any effect in arresting the course of scarlet fever? As a general rule, scarlet fever prevails most when there is most smoke—that is, in the winter season.

If, by disinfection, we could destroy all centers in the city, and all scarlet-fever cases, rich and poor, were removed into the country as fast as discovered, would that stamp out the disease? How far from the city, and in what direction, would you go, to prevent the poison in its most concentrated form—from literal pest-houses—from being wafted back into the city by the ever-changing winds? Is it forgotten that the country is not free from visitations of scarlet fever, and that when it obtains a foothold, it often spreads over whole districts, and is sometimes very fatal? It is scarcely a month since I saw, in an elegant mansion on one of the highest and most salubrious points upon the hills of Kentucky, about four miles south of Newport, twenty cases of the disease lying at the same time. Would there be no danger of it spreading from there and reaching Newport, or even Cincinnati, although every other house might have been disinfected?

I would favor every means to prevent an epidemic of scarlet fever, or of any other disease, that would promise probable or even possible success, and, failing in that, I would test every practicable

means of arresting its progress. If prophylactics are thought useful, I would employ them. We had at one time high authority for the use of belladonna as a prophylactic, but little reliance is now placed in that agent. It had its origin with Hahnemann, now passes current with his other theories, and commands about the same amount of confidence.

If tenement houses are found to be dangerous, I would have them vacated, and have a law passed against their erection altogether, or permit them to be erected only with proper regard to light and ventilation, to the size of the rooms, and the number that might be allowed to occupy them. In this connection it might be noticed as a remarkable fact that the ratio of mortality to the population in Cincinnati, where there are so many tenement houses and a comparatively small country district, compares favorably with that of Philadelphia, where there are so very few tenements, and where the corporation embraces the whole county. The following shows the ratio of mortality in the two cities from 1870 to 1873 inclusive :

RATIO OF DEATHS TO EACH 1,000 INHABITANTS IN		
<i>Year.</i>	<i>Philadelphia.</i>	<i>Cincinnati.</i>
1870.....	22.72	18.17
1871.....	22.9	21.7
1872.....	18.98	20.46
1873.....	20.03	22.8

In 1870 and 1871, the ratio was less in Cincinnati. In 1872 and 1873, it was but little more, although the epidemic of small-pox, which carried off 966 cases, prevailed in the former, and epidemics of cholera and scarlet fever, which carried off jointly 617, prevailed in the latter year.

I would by no means discard disinfectants. The term disinfectant is employed in different senses. Some use it as synonymous with antiseptic, an arrestor of putrifaction; some as signifying an air-purifier, or deodorant; and others limit it to a destroyer of specific poisons. There can be no doubt that chemical agents can be used with great advantage to arrest putrifaction, and for the purification and deodorization of the atmosphere; but whether they could destroy the specific virus of scarlet fever, might require additional proofs to those already offered, before the fact would be satisfactorily established.

Putrifaction and vegetable decomposition are undoubtedly the causes of different diseases, and I would certainly employ agents

to arrest or prevent them when possible. I would also use them for the general purification of the atmosphere when charged with noxious and deleterious matters. In cities and large towns the air is rendered impure from various causes : By the large quantities of carbonic acid from the lungs, and the emanations from the bodies of people themselves ; by the carbonic acid and oxide, and sulphurous and sulphuric acids from combustion ; by effluvia from decomposing animal and vegetable substances ; by gases and vapors from various manufactories ; and by solid particles of different substances held in suspension. The great natural destroyer of these impurities is the atmosphere itself, aided by rain-falls. Organic substances become oxidized, others are rapidly diffused and carried off by the winds, and the more solid and heavy particles precipitated by rains. Ventilation is therefore the great natural purifier of vitiated air in houses. It can be aided by chemical agencies when the impurities are confined to dwellings, workshops, stores, and manufactories ; to cess-pools and sewers ; to drains, and other sources of the impurity, as the putrifaction of dead animals.

In using chemical agents for the purification of the atmosphere, we have some knowledge of their *modus operandi*. We know that dried earth, quick lime, and charcoal absorb impurities. The earth, by natural laws, soon reclaims its own, or what it had parted with in the growth of vegetation for the support of animal life. Beneath, as well as above the surface of the earth, is going on a constant purifying process, or the working of natural laws to restore to their original state the elements of decomposition. Quick lime will take up carbonic acid, and the power of charcoal to absorb organic emanations is proven to be very great. We know also that chlorine and sulphurous acid will decompose sulphureted hydrogen and combine with ammonia.

But how do we know that either of these agents will destroy the specific poison of scarlet fever? Until we know its nature, we can at best only surmise the effects of chemical agents upon it, and our use of disinfectants can therefore be only experimental. In our experiments without a plausible theory, do we not run some risk of doing as much harm as good? Nitrate of lead is one of the most effective deodorizers for the dead or dissecting room, but would the greater danger arise from the animal emanations, or from the nitric acid and lead? Have we any assurance that disinfectants in the sick room might not, by depriving the lungs of a certain amount of oxygen in the act of respiration, be injurious instead of

beneficial? Carbolic acid has been highly commended as a disinfectant in scarlet fever; but have we any rational explanation of its action, or any positive evidence that it will destroy the contagion of the disease? It conceals odors, possibly from the greatness of its own odor. It conceals the odor even of sulphureted hydrogen, yet it will not decompose it. It arrests the growth of fungi, but experiments have shown that it does not destroy them. On the removal of the acid and the substitution of fresh air, the fungi revive and grow. If the contagion of scarlet fever is germinal—if it have, as some suppose, an independent life—what evidence have we that it will be destroyed by carbolic acid? If it is inorganic, what elements in the acid will combine with it so as to neutralize its power? The epidermic scales of scarlet fever are said to contain the poison, even after exposure and consequent drying in the air for weeks. Would it be destroyed by the fumes of sulphur or the vapors of carbolic acid? The virns of small-pox is soon destroyed by the influence of the atmosphere. We have evidence of this, by analogy, in the preservation of vaccine crusts. But the virus of scarlet fever, though less powerful than that of small-pox, is more subtle and tenacious, seems to be less subject to the influence of the atmosphere, and lingers longer in or about a dwelling, even after it has been cleansed and exposed to light and air.

I have had a great deal of carbolic acid used during the year, in houses infected with scarlet fever, although I have not yet any positive proof that it aided in arresting the disease. In some instances, no other case followed its use in a house; but in others, a second and a third would occur. As the same thing happened in houses in which it had not been used, I could only guess at the effect of the disinfectant. There is respectable authority for the use of disinfectants in specific diseases, as well as for the preservation of the general health, and I would not feel justified in refusing them a fair trial. This I have endeavored to give them; and I shall continue to do so, with the design of furnishing at a future time a summary of the results.

Various preventable causes may aggravate an epidemic of scarlet fever as of other diseases. These, of course, should be guarded against by disinfectants and other means. The essayist seems to think that great injury is sometimes done by the pretensions of physicians, especially irregulars, to cure the disease without difficulty or doubt. If this is so, I would prevent it by requesting

reputable physicians to unite in a card to the public exposing the imposture. But it is doubtful in my mind whether these claims do greater injury than charlatanry in other cases. These pretensions are sometimes not without a show of reason, although they are no doubt more frequently mere braggadocio. In the beginning of the present epidemic of scarlet fever, I had over twenty cases of the disease before a death from it occurred in my private practice. In the early part of my professional life, I might have attributed that experience to successful practice; but I have gotten over such notions, and believe that the result was due to natural causes, or at least to causes that I had little influence in directing. Individual cases, like particular epidemics, are characterized by different degrees of severity. Hence one physician may be apparently more successful than another employing precisely the same treatment. In the same way, a physician having "bad luck"—for I think this an expressive term—in one epidemic, may change his treatment in the next with a greater proportion of recoveries, and attribute the success to the change in the plan of treatment; whereas, it might really have resulted from the difference in virulence of the two epidemics. Dr. Graves speaks of an epidemic of scarlet fever in Dublin, from 1801 to 1804, with intervals of comparative freedom from the disease, which was very malignant and fatal. During the following seventeen years, the city was frequently visited by scarlet fever with comparatively little mortality. Young, progressive medicine was not slow to attribute the former fatality and the later more favorable results to an improved plan of treatment. This, Dr. Graves himself believed and taught; but in 1831 he changed his views. In 1831, scarlet fever again broke out, and in 1834 assumed the form of a destructive epidemic. "The nature of the disease," he says, "did not seem in the least connected with the situation or aspect of the patient's dwelling." It raged with equal violence in the cities, and throughout the country districts, on the mountain tops, and in the valleys. It was then discovered that the new was no more successful than the old treatment. It might be significantly asked how, in such an epidemic, the removal of patients from tenement houses into the country would "stamp out" the disease?

To attack contagia intelligently with disinfectants, we should have some idea of their nature, and some understanding of the chemical effects of the agents to be employed. I believe it is not now thought that contagia are either poisonous gases or animal

substances in a state of change. The more general opinion is that they are of a living nature. One theory is that they are of animal origin born in and growing out of the body; another supposes them to be of a fungoid character, and grow in the body only after being introduced; and still another theory is that they are a form of life lower than the fungi. In small-pox and vaccine diseases, the poison is said to be contained in solid particles, which can be seen under high magnifying powers; the epidemic scales of scarlet fever are supposed to contain the poison of that disease. If we could discover what would destroy these respective poisons without injury to the patient, we might hope to destroy them at the seat of origin, in the sick room, before their escape into and infection of the outer air. But if we remove patients to hospitals or other buildings, and expel the poisoned air of the sick room to be wafted to other buildings, we might be only aiding in disseminating the disease.

What may appear in these remarks as exceptions to the views of the essayist, are not uttered as dogmatic truths, or even as unalterable convictions; but are suggested as possible objections to the efficacy of the plan offered for stamping out scarlet fever, which may, however, be answered satisfactorily. I know, from the frequent interviews which have taken place between Prof. Murphy and myself, during the past year, that he has given the subject of scarlet fever a great deal of attention, and I would be disposed to pay great deference to his opinions.

Art. 6.—What shall be done with the habitual Drunkard?

A paper read to the Wayne County Medical Society, January 7, 1875, in support of the resolutions attached, by JAS. E. HIBBERD, M.D.

It is not the intent of this paper to discuss the general subject of intemperance, but to consider that phase of it which is denominated habitual drunkenness. And by this phrase is meant that condition of a man wherein he drinks alcoholic beverages to intoxication whenever opportunity offers. Not when opportunity incidentally offers merely, but who makes opportunity when none offers otherwise. In other words, a man is an habitual drunkard when the desire for alcoholic beverages becomes his ruling passion,

and the drinking of them his leading practice, and all for the sake of the intoxication they produce.

When a man has arrived at this stage of a drunkard's career, he has lost the higher characteristics of his manhood. He has lost his recognition of the dignity of his position in the scale of created beings; he has smothered his moral nature; he has drowned his sense of honor; he has dishonored the ties of consanguinity, and he has ignored his obligation to care for himself and for those dependent on the proper exercise of his physical and mental ability.

This condition is never, it is believed, a congenital one, but always the result of education or training—a condition into which the victim voluntarily enters; yet, nevertheless, one, when fairly entered, he can no more control than he can control the advent of hunger, or the necessity for sleep.

In short, under the change wrought in his mental operations through alterations induced in his physical organization by the action of alcohol, he has become irresponsible for his acts. Disease has been engendered in his body, such that it makes the healthy action of his mind impossible. And this abnormal mental activity is a species of insanity, differing widely from ordinary insanity in its cause and manifestation, but insanity nevertheless. Perhaps it would be better to regard the term insanity as generic, as it really is, and make the aberration under consideration a species, to be designated alcoholic insanity.

It can scarcely be necessary to enter into a lengthened argument to establish the fact that an habitual drunkard is insane. A very brief argument will suffice.

An insane person is defined to be one of unsound mind. A sound mind being the standard, it becomes necessary to define it, which, for our purpose, may be done by saying that a sound mind, as regards any given department of sociology, is one that approximates the average condition of the minds of all the people in a community touching the duty of an individual in that particular department.

Let us apply this principle. In this community it is the sense of a vast majority of the people that it is a man's duty to provide shelter, food, and raiment for himself and family; to contract no unreasonable obligations, and to fulfill all obligations that he enters into; to protect his own property and to respect that of others; to maintain certain social relations with his neighbors, and to live up to his religious convictions.

Now, let us adduce the career of an habitual drunkard, and witness how widely he fails of fulfilling these reasonable responsibilities. There is a married man in this city, an accomplished mechanic, who always had a thrifty establishment until he became an excessive drinker of alcoholic beverages. Then his business ran down, soon utterly faded away, and he became a financial wreck. His family are in rags, and insufficiently fed. He works by fits and starts for another man until he obtains some money, then gets drunk, generally has a fight or two, is arrested and fined, induces some one to go his bail, works again until he earns more money, then starts on a fresh spree. Does this man live up to his responsibilities? If not, he is insane.

Another married man allows his wife to do washings to support him and their children, and the little he earns he spends for drink, and occasionally begs, steals, or forces from her, a little of his wife's hard earnings to buy liquor with. Is he fulfilling his reasonable responsibilities according to the standard? If not, he is insane.

An unmarried man, formerly a good mechanic, with full work and plenty of money, is now supported by his brother. He is so devoted to gratifying his love of drink, and so lost to his once high sense of honor and honesty, that if his brother gives him money to buy a pound of butter for the family, he will buy whisky with the money, and return drunk without the butter. Is this man's conduct up to the average of the community in which he lives? If not, he is insane.

Another unmarried man, twenty-five years old, with many accomplishments of manners and mind, lives on his father's bounty, and his sprees are so frequent, and in them he is so violent, that the whole family are in a state of perpetual terror, and are, by his bad conduct, wholly unfitted for the high social duties that their wealth and education would otherwise so admirably fit them for. The father has spent thousands of dollars to repair damages done to property, person, and character by this erring son in his drunken rage. Is this son up to our standard? If not, he is insane.

But is it needful to recite more examples? If the premises laid down be correct, does not every sound mind know of many, alas! too many unsound ones of this particular class. Where is the blood in human vessels that does not have kindred blood coursing through crazy brains—brains that would honor their possessor and

his kind, if it were not for the undue ascendancy of the fiery king that beguiles and destroys.

We therefore conclude that every man who drinks an excess of alcohol loses his normality, and the most notable feature of this loss is the unsound condition of his mental faculties, and this unsoundness is of the nature of a special phase of insanity.

The resolutions propose to confine a man who is thus insane. Do you ask what right has any man or any number of men to rob a fellow-citizen of his liberty? That is the point. We will address ourselves to its consideration for a few moments. Only two adequate reasons can be assigned for such an act: First, to benefit the subject of the restraint, and, second, to protect the community.

But let us for the nonce lay aside the consideration of alcoholic insanity, and in a few sentences review the general relations of society to persons who are esteemed so abnormal as to make it proper, in behalf of the common weal, to deprive them of their liberty, and then apply the deductions that result from the review to the case in hand.

Self-preservation is a great law of nature, and it is just as imperative in a community as in an individual. When any member of a community becomes a source of danger to the common or individual welfare, it is not only the privilege, but it is the bounden duty of such community, through regulations established for that purpose, to interfere and restrain the man. If the danger that attaches to him be from criminal intent, he should be restrained and punished, and reformed, if possible. If the danger arise from disease of a contagious character, he should be restrained and isolated, and restored to health, if possible. If the danger grow out of maniacal fury, he should be confined and treated in an institution specially organized for the management of that form of disease. Suppose it be granted that a man is insane, that is not of itself sufficient to warrant the public authorities to take charge of him so long as he is harmless toward the person and property of others, and has friends who care for him. True, every recently crazy man is considered a fit subject for restorative treatment, and the State at large has provided the place and means for such treatment, of which the friends of the insane may avail themselves, if they chose. But the authorities will not originate measures for arrest and confinement of the insane, unless he be dangerous in some way. This is not a new doctrine. In fact, it is a part of the provisions of existing organizations in every civilized community.

Do we not see how constantly criminals are convicted and punished, and that they are sometimes reformed? Do we not see how quickly the authorities will take charge of a man who has the small-pox, or the cholera, and this solely to protect the public against the infection of a contagious disease? And do we not frequently witness the legal inquiry into a man's alleged insanity, and if the inquisition declare him insane, see him sent off to the hospital for treatment? Sometimes these proceedings on behalf of the insane are set on foot in the hope of a cure solely. Sometimes they are inaugurated for the purpose of putting one under restraint whose insanity is of a character to make him dangerous to the persons about him, or to their property.

By operation of the law, as it now stands, if a man commit crime he is punished; if he be dangerously insane, he is sent to the hospital for treatment. But if a man be sane, when not under the influence of alcohol, on all subjects except that of drinking, he is not, by the law, held to be insane, albeit he has no power to refrain from drinking, and when drunk, is a raving maniac. What is wanted now is a law that will recognize habitual drunkenness as a disease—a species of insanity, in fact, that both the subject's best interest and the general welfare requires should be adequately treated. But as it can not be properly treated in private houses, the law should therefore also provide public institutions for the relief of these otherwise hopelessly ruined citizens, and while restoring the victim of disease to health, would, at the same time, save the public from the consequences of his insane depravity.

A law, however, which is not sustained by public opinion can not be maintained in activity for any considerable time; and public opinion will not sustain any enactment that is not in accord with the general sense of right and justice; and the general sense of right and justice will not, and ought not, to sanction the depriving any man of his liberty, until it be clear that such restraint is the best, if not the only means of preventing great private and public wrong.

It is my opinion that the public head and heart are ready to see that habitual drunkenness is a species of insanity that can be successfully managed only in institutions specially organized for, and adapted to, the end in view. But this function of the public head and heart lies dormant in a great measure, and to make it available for the good end, it must be aroused into active, aggressive life. And to me it seems quite clear that physicians are the

leaven that must start the fermentation in the whole mass of the public, which, when fairly leavened throughout, will see as with one eye, and move as if touched by a common inspiration, to establish and maintain the truth as herein indicated in an efficient and active manner. Therefore, I ask a vote of approval by this society of physicians, to-day, of the sentiment expressed in the resolutions before it, that we may here and now put this ball in motion, with, on my part, a full hope and an abiding faith that it will roll on until the ideas herein presented shall prevail over the land, and the measures herein indicated shall be put into active operation, and prove the blessed means of curing thousands of men of alcoholic insanity, and saving still more thousands from becoming insane. For, in my judgment, this, or a related plan, which shall hold men to an individual responsibility, offers the only possible means of checking the wide-spread tendency to the excessive use of alcoholic beverages.

The love of personal freedom, and of the widest liberty of action, is so strong in the American citizen that it will be only an occasional one who will pursue a course of indulgence in an appetite that he knows will inevitably lead him into an insanity for the cure of which he will be incarcerated, and compelled to labor without the liberty to determine the time or character of his work. Perhaps for the people in other countries, the plan under consideration might be futile; but for the people in America, if I do not misread them, you can touch but few chords more sensitive than the desire to drink as often and as much as they please, and one of these is the love of personal liberty and independence.

An affirmative vote on the resolutions, of course, is intended only to have the force of the expressed sentiments of the society on the principle involved. When public sentiment is ripe for the inauguration of institutions to put these principles into active operation, it will not be difficult to draw up plans and specifications that will convince all reasonable people of their practicability, and that the maintenance of them will be no expense to the public at large; that they will sustain themselves, and have a large surplus for the benefit of whoever may be rightfully entitled to the product of the talent and labor of the subjects of this restorative discipline.

RESOLUTIONS.

Resolved, by the Wayne County (Ind.) Medical Society—1. That it is the sense of this society that persons who drink alcoholic

beverages to intoxication constantly, or frequently, and while intoxicated waste the means of living for themselves or others, or abuse themselves or others, should be held to be of unsound mind.

2. That a suitable name for this aberration of mind is "Alcoholic Insanity."

3. That alcoholic insanity being a special form of disordered intellect, arising out of a specific cause, should be treated in institutions specially prepared for, and strictly confined to, this one class of patients.

4. That institutions for this purpose should have three leading characteristics, to wit:—first, Restraint; second, Proper Regimen; third, Profitable Industry.

These resolutions were unanimously adopted and ordered to be published.

When the great Duke of Marlborough was hesitating whether he should take a prescription recommended by his celebrated Duchess, "I will be hanged," said her Grace, "if it does not cure you!" Sir Samuel Garth, who was present, and to whom the vixen character of the lady was well known, instantly exclaimed, "Take it, then, your Grace, by all means; it is sure to do good one way or the other."—*Med. and Surg. Rep.*

A physician at North Guilford, Conn., recently attempted to collect a bill of \$50 for professional services, when it was offset by a formidable bill for dinners, horse-baitings, presents of milk, fruit, and vegetables, all of which had been tendered ostensibly out of good will. Strange to say, the patient's offset was held valid in a New Haven court, and the doctor had to pay \$7 to get square.—*Med. and Surg. Rep.*

The warden of the Oregon Penitentiary has discharged the prison doctor and detailed one of the convicts, who is an educated physician, to perform the duties. The warden claims that thereby he saves \$1,500 a year to the State, and, besides, is sure that the physician will "always be within reach when needed."—*Med. and Surg. Rep.*

Proceedings of Societies.

THE CINCINNATI MEDICAL SOCIETY.

The Cincinnati Medical Society met December 15, 1874—the president, Dr. Kemper, in the chair.

The Society proceeded to the discussion of the paper of Dr. Holdt on diabetes mellitus.

Dr. Holdt recapitulated some of the principal points of his paper. Diabetes, he said, was primarily a symptom of some nervous trouble. What part of the nervous system was affected, was not yet ascertained with any satisfactory degree of accuracy. He did not believe that, under any circumstances, diabetes was a disease of the liver. He alluded to the experiments of Drs. Boeck and F. A. Miller. A solution of common salt was slowly injected into the carotids of rabbits. In a short time there was an increased secretion of urine, and in an hour, sugar to a considerable amount was found in the urine. A more rapid flow caused the earlier appearance of sugar. On examination of the livers, they were found free from sugar or glycogene after the mellituria ceased, which took place after many hours. Salts formed by the organic acids and the alkalies, particularly the acetates, caused sacchuria; bromide of sodium did not have the same effect.

If the splanchnic nerves were cut, diabetes could not be produced, or, if existing, it was stopped. Injuries and diseases of the skull and brain frequently produce temporary, or even permanent diabetes. These results seem to strengthen the views of those who hold that diabetes is a symptom of some morbid affection of the nervous centers.

Popoff, believing that anything that promoted oxidation within the blood, diminished the quantity of sugar in the urine of diabetics, administered alkalies, with the effect of increasing the quantity of sugar, but diminishing the quantity of urea. Lactate of iron was then tried, but with no effect. Arsenic was next tried, with the effect of diminishing the quantity of urine and sugar to a marked degree. The administration of glycerine also caused a

diminution in the quantity of sugar. Wines increased the quantity of sugar; strong wines to a less degree than the light.

Dr. Comegys said that some remarkable cures had been reported by the "skim-milk" treatment. He had seen some cases where favorable results followed the use of the Bethesda water. He believed the disease to be due to disturbance of the nervous centers, marked lesions being found in these cases in the cerebro-spinal system, the corpora striata, thalami optici, and parts of the cerebellum; not much alteration in the gray matter. Glycogenesis is not a normal function of the liver, but a post-mortem occurrence. The injection of alkalies into the arteries causes, first, polyuria; next, sacchuria. The injection of bromide of sodium did not produce this result. This was due to the power of the bromides to reduce the arterioles. The good effects of the arsenical preparations and of opium are due to their power in reducing the caliber of the arterioles, cutting off blood supply.

Dr. Holdt said that late investigations had shown the correctness of Pavy's views. His experiments were repeated in the most careful manner, and confirmed, in the most minute particular, his conclusions. An excess of sugar was not produced by the liver, but the liver did not consume the sugar elsewhere produced.

Patients affected with diabetes show a lower degree of temperature than normal—sometimes amounting to one degree.

Dr. Mackenzie gave the views of Dalton, as expressed in the last edition of his physiology, on the glycogenetic function of the liver.

The Society then adjourned.

Society met December 22, 1874—the president, *Dr. Kemper*, in the chair.

Dr. Taylor read a paper giving an account of a case of morphia-atropia poisoning, with an inquiry as to the antagonism of the two drugs in toxic doses, published in January number of LANCET AND OBSERVER.

Dr. Comegys said he had been called to see a woman poisoned with opium. She was unconscious; respirations 4 per minute—afterward sank as low as 3 per minute; skin cool; clammy perspiration; pupil contracted; pulse very small. $\frac{1}{15}$ gr. sulph. atropia was administered hypodermically. Electricity was so applied as to cause contraction of the muscles of respiration. No other treatment. The patient recovered. The quantity of opium taken not known. Patient had melancholia.

Dr. W. B. Davis said that one year ago he was called to see a man who, in a fit of melancholy, had taken about 3 grs. of morphia. Found patient with skin cold and clammy; pupil contracted; respiration slow. He injected $\frac{1}{20}$ gr. sulph. atropiæ every hour. There was a slight response on the part of the pupil, but there was no reaction. The patient died with all the symptoms of opium poisoning. Speaker thought the antagonism between opium and belladonna was not proven; the most eminent therapeutists of this country do not believe in the antagonism of the two drugs. The most eminent foreign writers are also opposed to antagonism, some claiming that there is an increased poisonous effect when both are given. Distinguished experimenters claim that in the final stages of poisoning by these articles, the conditions are the same—death being produced by failure of respiration and failure of the heart's action.

Dr. Quinn said he had treated two cases of opium poisoning without the use of atropia. He thinks there is some antagonism, but whether of benefit in the treatment of poisoning, he can not say. A child 5 months of age was given ʒss. of tr. opii. by mistake. Syr. ipecac was administered by the mother, and on the arrival of the doctor he administered salt and mustard, which excited free emesis. The child was kept awake; the pupils gradually dilated, and the child slowly recovered.

A girl, aged 20 years, took opium. An emetic was administered and a stomach-pump used. The patient was kept awake and finally recovered.

Dr. Murphy spoke of a series of experiments by Dr. Campbell, of Alabama, on the reflex system. In cases of poisoning by opium, Dr. C. had used caffeine as an antidote. It was administered by the stomach if the patient could swallow; if not, by the rectum. In several cases it was used when the patients were in extremis. Dr. M. had confidence in strong coffee. He thought the question of antagonism could not be determined by experiments on inferior animals, as we have only an approximate effect on those animals in experiments to test the physiological effects of drugs. For instance, goats can eat tobacco with impunity. In judging of the toxic effects of opium, some account should be made of the condition of the person at the time the poison was taken, as influence of the mind, state of nervous system, etc. In the cases reported by Drs. Davis and Comegys, where the drug was taken with suicidal intent, the patients had lost vital resistance—moral and mental

support. The nervous system was undermined. The only case in which we could fairly judge of the effects of opium and atropia was when the poison had been administered to a person in good health. When opium had been given by mistake to such a person, he thought the hypodermic use of atropia would be proper. He thinks not enough account is made, in the treatment of cases of opium poisoning, of what are regarded as slight adjuvants, as flagellation, keeping the patient moving, etc. In the treatment of a case of opium poisoning, speaker would use very small doses of atropia, and *vice versa*. He commended to the Society the use of caffeine in such cases.

Dr. Comegys reported a case to which he had been called. He found a man who had attempted suicide with opium, with a slow, weak pulse, clammy skin, very slow respiration. Artificial respiration was kept up for four hours, and patient recovered. In a case of accidental poisoning by belladonna, he found the patient with loss of power to expand chest. Tr. opii and brandy were freely given. The action of heart in poisoning by belladonna is stronger than in opium poisoning. Belladonna stimulates the nerve centers. Arterial tension is increased by both drugs when not given to excess.

Dr. Taylor said that the experiments which had been made on inferior animals had not been satisfactory, some of them bearing very large doses of atropia. In his paper he had confined himself to the effects on man of toxic doses. He thought there was little to encourage us in the use of one of these poisons as an antidote to the other. He would hesitate to use them. Small doses of atropia are sometimes dangerous, while at other times larger doses may have less effect. He also thought that in the treatment of poisoning by opium, exercise to keep the patient awake was sometimes carried too far. In these cases the exhaustion caused by the drug was increased by exercise. In an extreme case he would not allow active exercise.

In answer to *Dr. Quinn*, *Dr. Taylor* said he thought the large dose of morphia, which preceded the dose of atropia in the case reported by him, had nothing to do with the recovery of his patient from the atropia poisoning. He thought the effect intensified when both were given at or near the same time.

Dr. Davis mentioned a case reported by *Stille* of a child who took one grain of atropia at a dose. Morphia was used hypodermically and recovery followed. With reference to the physiologi-

cal action, opium produces congestion of the cerebral vessels; belladonna contracts the muscular coat of the vessels, and hastens circulation.

Dr. Mackenzie presented for inspection the lungs of a man who, after two days' residence in the Cincinnati Hospital, had died suddenly from profuse hemorrhage from the lungs. The man attributed his illness to exposure and fatigue at the time of the burning of the steamboat *Pat. Rogers*, in August.

On opening the body, the thoracic organs presented a remarkable appearance. The right lung protruded and occupied more than the normal amount of room in the thoracic cavity. It was slightly adherent to the thoracic parietes. The left lung, which was largely adherent, did not come to the median line by four inches. The trachea and bronchiæ were filled with blood. The pleura of left lung was thickened from one-fourth to one-third inch. On making a section, he observed a cavity lined with a firm membrane. Projecting from the walls of this cavity was an aneurism on a branch of the pulmonary artery. At the lower portion was an opening through which a probe could be passed into pulmonary artery. He thought this was the point from which the fatal hemorrhage occurred. At the lower edge of the lung was a patch in a state of acute inflammation.

The right lung presented a condition of interest. The surface was roughened from distention of vesicles—pulmonary emphysema. There was no tendency to collapse, owing to this emphysematous condition. This condition was due, the speaker thought, to the fact that the left lung, being prevented from expanding, there was a compensatory distention of the right. The patient dates his illness from August last. *Dr. M.* thinks this condition of the lungs could not have arisen in so short a time—four months. It must have been the work of two or three years.

Dr. Carson. This case illustrates one form of hæmoptysis. He had seen a case some time before, in which death occurred suddenly from rupture of an aneurism in a pulmonary cavity. In reference to the duration of the disease, he thought it might have occurred in a much less time than that mentioned by *Dr. Mackenzie*. But for this fatal hemorrhage, the man might have lived for a much longer time, there being sufficient healthy lung-substance to have sustained life for some time.

Dr. Murphy said that four years ago he was asked by a gentleman for a prescription for cough. A prescription was given and

some directions, which, however, were not followed. Three weeks later he was consulted again. The patient was exhausted; had large and small mucous rales in left lung, more marked posteriorly than anteriorly. In the right lung the same condition existed as low as the nipple. He continued some days better, some days worse, until April. The doctor gave him but little encouragement. In two weeks a homeopathist took charge of the case, and one week later, as the patient rose up in bed, there was a profuse discharge of blood from the mouth, followed by immediate death. There was no autopsy. Dr. M. thought death in this case was caused by rupture of an aneurism.

Dr. Mackenzie thought a much longer time than four months would be required for the production of such a quantity of fibrous tissue.

The following is a summary of Dr. Murphy's paper on a method of stamping out scarlet fever, read before the Cincinnati Medical Society, December 15, 1874:

1. Scarlet fever might be stamped out by removing all of the children of the poor, as soon as attacked, to a special hospital outside of the city limits, from which they should not be discharged for two months.

2. On being discharged, they should be clothed with new garments.

3. In cases of the rich, and those living in well-ventilated houses, the patient with the disease should be isolated in one of the rooms near the top of the house.

4. A red flag, or some sign to indicate the presence of the disease in the house, should be attached to it.

5. All communication with the house, except for sheer works of necessity and mercy, should be forbidden.

6. When the disease has terminated, the room, and even the house, should be cleansed and disinfected, and all clothing, carpets, and even furniture, burned or subjected to a high artificial temperature.

The Cincinnati Medical Society met in regular session, January 5, 1875, Dr. Holdt, president *pro tem.*, in the chair.

The discussion of the paper of Dr. Murphy, on stamping out scarlet fever, was then opened by Dr. Quinn, who read a paper giving his views on the subject.

Dr. Taylor said, that during twelve years' service at the House of Refuge they had had but few cases of any epidemic disease. Of the few cases of scarlet fever that had occurred there, all but two had probably contracted the disease prior to admission. The children admitted were from the class most affected during epidemics, making it reasonable to expect more cases of these diseases. He attributed their immunity from epidemics to perfect regularity of habits, early hours, discipline, exercise, cleanliness, and good diet. Last spring a boy, who had been in the house about ten weeks, broke his arm. While in the hospital, scarlet fever, in a severe form, developed. He had not been in contact with the outside world since admission. He was isolated for one month. After recovery his clothing was burned and the apartment disinfected. No other manifestation of the disease for eight months. He can not account for the appearance of the disease in this case. Some other boy, coming in later, might have been the carrier without himself having the disease.

About three weeks ago a well-marked case of scarlet fever developed in a boy who had been in the house less than a week. He had been exposed before admission. A week later, another case developed in a boy who had been in over a year, but he had not been in contact with the first patient.

Dr. Taylor thought isolation and disinfection had prevented the spread of the disease through the house.

Dr. Comegys believed that isolation, pure air, and cleanliness would do much to prevent the spread of the disease. The difficulty was to exercise medical authority. He thought medical men should urge the enactment of judicious health laws. He urged isolation in all scarlet-fever cases. Does not believe in sporadic cases of scarlet fever.

Dr. Murphy thought that by isolation and disinfection it would be possible to prevent the spread of epidemics. In the cattle-plague, in England, the use of carbolic acid had stopped the extension of that disease. He thinks scarlet fever is often carried by nurses or others who remain for some time in the presence of scarlet-fever cases; thinks the disease may have been carried to the House of Refuge by persons who worked there but lived outside.

On motion of *Dr. Comegys*, the subject was continued until the next meeting.

Dr. C. E. Jones was introduced by the chairman of the admitting committee.

CLARKE COUNTY MEDICAL SOCIETY — JANUARY MEETING.

W. G. BRYANT, PRES'T.

ISAAC KAY, SEC'Y.

The Clarke County Medical Society held the regular session at their rooms, in Springfield, on Thursday afternoon, commencing at 2 o'clock—Dr. Bryant, president, in the chair.

Members present—Drs. Banwell, Bryant, Carroll, D'Richey, Dougherty, Kay, McLaughlin, Pollock, Reddish, Reeves, Rice, Rodgers, Senseman, and Totten.

Dr. Seys reported a case of ulceration of the uterus.

Dr. Banwell reported a case of granular pharyngitis of more than twelve months' standing. The digestion in this case was bad. Treated with bismuth, iodide of potassa, and other alteratives of that class. *Dr. Banwell's* case was discussed by Drs. Seys, Reeves, McLaughlin, and Kay.

Dr. Rodgers reported a fatal case of convulsions connected with the puerperal state. There was an uremic condition of the system. This case was further discussed by Drs. Seys and Reeves.

The following resolution was then taken up for consideration, viz :

"*Resolved*, That the code of ethics of the American Medical Association is in perfect harmony with the spirit of liberality which characterizes the present age."

Dr. McLaughlin remarked that he could have but little to say upon this resolution, unless some one attacks the code of ethics. He had no objection whatever to that code.

Dr. Seys did not believe that the American code as it now stands fully meets the demands of the times in the government of the medical profession. It hampered rather than facilitated the progress and welfare of the medical practice. He objected to section four of article one, defining the duties of physicians to the profession at large. This section will not permit a physician to inform the public what he is able to do. Whilst the quack is advertising his remedies and his abilities, the regular doctor, who has spent a fortune in obtaining a finished education, and who may have visited all the hospitals of America and Europe in order to qualify himself for treating disease, is not allowed by this section to put a line into the newspapers intimating that he is thus qualified. The section is life to the quack, but death to the poor honest physician. It is life to the quack, because it keeps all men of real skill from com-

peting with him in advertising his abilities. One of the ablest physicians in America was expelled from the American Medical Association for advertising that he could cure syphilis. This was wrong and oppressive.

Dr. McLaughlin said that the American Medical Association did right in expelling the celebrated physician of the East just mentioned. If that doctor had superior knowledge of this disease, it was his duty to have made known his remedy to the medical world. Most probably he did not have that knowledge. A man who acts upon the highest principle is willing to do the greatest good to the greatest number. He did not believe in secret nostrums nor in flaming advertisements. It had been urged that a true gentleman did not need a code. That might be true, and yet it argues nothing against a written code, setting forth the proper rules to be adopted in governing physicians. The code can be violated without saying a word. A glance of the eye, a contemptuous gesture, or sneer, with no accompanying words, may inflict a great wrong to a professional brother, by breaking down the confidence of his patient. All of these violations of good fellowship should be provided for in a code, whether men will hear or forbear. If the door for advertising was thrown wide open, there would be no limit to its extent. It would require a great deal of space in the newspapers for every doctor to set forth his special claims to the popular favor. This kind of literature would leave scarcely any room for other matter in our papers. A doctor might have nothing to offer the public except a colored solution of common salt for the treatment of catarrh, and he might push the claims of this remedy by advertisement to a ridiculous extent, saying that no other doctor in the world knew of the valuable secret, and yet without this section of the code, so facetiously objected to, nothing could be done by a medical society to affect his standing in the profession.

Dr. Carroll remarked that it would be well to define what the code is, and also what is meant by the spirit of the present age. *Dr. Carroll* spoke particularly of the duties of physicians in consultations. It should be remembered that medicine is a liberal and learned profession. Every age has been characterized by divers spirits. During the early history of medicine in the Roman empire the spirit of *war* prevailed. During the middle ages we had the spirit of *superstition*; but in this age we have the liberal spirit. A man who has arisen high enough to live in the liberal spirit of this age, may perhaps need no code; but if he do need a code, he will find

a sufficiency in our code as it stands. A man may be a true gentleman, and yet need a code in order to instruct him in regard to the proper course to pursue.

Dr. Rodgers said that when this resolution was brought up, some of our members became alarmed lest the medical profession should suffer by the discussion. It should be borne in mind that every set of rules adopted by men have been found imperfect, and that they had to be changed somewhat. We should not entertain a superstitious regard for instruments of this kind. In respect to our present code, *Dr. Rodgers* was not sure but that larger liberties should be allowed to physicians by way of advertising. He believed that members should be allowed to advertise such specialties as that of oculist, or men who treat diseases of the chest or throat should be allowed to publish the same by card or otherwise. He thought that the third section of article first was not fair to the young practitioner who wishes to practice a specialty. It offers a premium to the lazy members of the profession, by denying the studious, industrious, and skillful young man from making his abilities known. *Dr. Rodgers* thought that any man who holds a useful patent should have the privilege of selling it as a patent, and of realizing all the money from it that the instrument is worth to the public. The cases of the men who discovered ether and vaccination were ably discussed, as showing the manner in which the code sometimes works oppressively to the deserving. *Dr. Rodgers* then remarked that some improvements might be made upon the section pertaining to consultations. A more liberal course should now be allowed by the code. Humanity to the sick may require us occasionally to vary from the letter of the fourth article. Under some circumstances a certain kind of recognition should be made of irregular practitioners. *Dr. Rodgers* alluded to many instances in which such recognition should be made. The immediate relief of some suffering fellow-being may demand co-operation with homeopaths, or other irregulars, who may happen to have the case, and who may call on a regular physician for assistance.

Dr. Kay wished to give his cordial adherence to the national code of medical ethics. He did not believe that much improvement could be made upon it. The document was plain, complete, and comprehensive, setting forth clearly and unmistakably: 1. The duties of physicians to their patients, and the obligations of patients to their physicians; 2. The duties of physicians to each other and to the medical profession at large; and, 3. The duties of the

profession to the public, and the obligations of the public to the profession. Under these three grand divisions of our code we have eleven articles, which are again subdivided into fifty sections, and in those we have limned out every duty and obligation arising from the relations existing between physicians and patients, between physicians themselves, and between physicians and the public at large. The principles upon which these duties and obligations rest, and the manner in which they are to be discharged, are essentially the same as those contained in the Scripture golden rule of "doing unto others as we would have others do unto us." The gentlemen who drew up the American code of medical ethics have done their work with masterly hands; for, in all the history of this instrument, we have never heard of any alterations having been made in its structure. When we consider the firmness with which it has stood for so many years, notwithstanding the searching criticisms to which it has been subjected, and the severe tests which have been brought to bear upon it, all of them calculated to reveal its weak points, if any there be, we are forcibly impressed with the correctness of its principles and the adaptedness of its rules to the object intended. We could not have selected a task more difficult than the laying down of rules for the government of physicians, under all their peculiarly complicated and perplexing relations of life. And especially would it seem a hard undertaking to furnish a code which should receive such a universal and unquestioning recognition as the system of ethics adopted by the American Medical Association has received for the last quarter of a century. We do not claim that physicians as a class are to be held up as models of peacefulness and of brotherly kindness; but our point in this discussion is, that in no case is discord or misunderstanding among physicians attributable to any defect whatever in the code of ethics itself. We have never heard of a physician who was involved in ethical troubles assert his belief that there were any such defects. Dr. Kay then proceeded to point out several sections of the code, whose letter and spirit had but too frequently been violated by a few medical men of the regular school in this community, headed by a man of some note. The evils which have grown out of these violations tend but to demonstrate the justness and correctness of the rules themselves. These evils are continuous and far-reaching in their nature; for although the parties complained of, having, as a result of their course, forfeited their membership in the Clarke County Medical Society, and have thus

assumed the position of outsiders, yet the medical faculty of this city and county occasionally feel the jar of discord and contention resulting from their defection. These parties, having withdrawn themselves from the restraining influences of a wholesome code, and well knowing that they are now beyond the reach of disciplinary power, feel themselves free to conduct a kind of guerilla warfare upon their professional brethren within the regular ranks. These men seek, and are now to a certain extent enjoying, the protection and advantages of good society, without subjecting themselves to the duties, obligations, and responsibilities imposed upon them by such society. The full and hearty professional recognition of such persons, while in their abnormal position, is but offering them a premium for the course which they are pursuing. We should not only apply sound criticism in examining the merits of our code, but we should try to live up to its requirements, for they are just and reasonable.

Without having time to take any further action upon the subject, the society, after a session of three hours, adjourned to meet again on the second Thursday in February.

Vinegar Bitters.—A number of years ago, an individual coming overland with a company to California, served as cook for the company, and was styled "doctor" on that account. He settled in Calaveras county, and labored as a miner without much success. His attention was then turned to the medicinal qualities of the herbs growing about him, and he came to San Francisco with the idea of making and vending a preparation to be called "Indian Vegetable Bitters," and to contain no alcohol. He fell in with an enterprising druggist of this city, who saw money in the project and embarked in it. At the suggestion of the latter, the "Indian" was struck out, and, as the new medicine got sour by fermentation, it was concluded to call it "Vinegar Bitters," and to identify it with the movement against alcoholic drinks. The mountain herbs were cast aside, and aloe, being a cheap bitter, were substituted. "Nine sick persons out of ten," said the druggist, "will be cured by purging; whereby the aloe." So the cook became a doctor, and the decoction became sour, and Dr Walker's Vinegar Bitters began their career in the newspapers.—*Pacific Medical Journal*.

Hospital Reports.

A RARE OBSTETRICAL CASE.

Service of Dr. M. B. WRIGHT. Reported by PHILIP ZENNER, Resident Physician.

Mary G., æt. 35; second pregnancy. Menstruated last in September. Was delivered of a child nine years ago; labor was protracted and child was stillborn, but it was a natural delivery and no trouble followed it. A year ago the patient was quite sick with some disease of the uterus. The physician who treated her at that time said that she had been complaining of severe pelvic pains; and, on making an examination, his finger was arrested within two or three inches of the orifice of the vagina by some hard body which he thought was the uterus, enlarged and hardened; but he could feel no os. She got better in a few days, her menses appeared, and no further examination was made.

The patient was admitted to the hospital, March 13, 1874. She was working around the ward, and no special attention paid to her until March 22d. Physician was called to see her at 11:30 A. M. On entering the confinement-room a very offensive odor was observed. The patient states that she has been suffering with uterine pains for several days, but that the waters began to escape just before she was brought into the confinement-room. That the membrane had been ruptured seemed to be substantiated by the fact that the bed-clothes and her under-garments were moistened.

On making a vaginal examination, the finger was arrested before entering its full length within the vagina by a closure of the latter. A septum could be felt, running antero-posteriorly across its terminus, on each side of which was a shallow cul-de-sac. Neither cervix nor os could be felt, nor the presenting part of the child. But in the cul-de-sac to the left of the septum the surface was slightly corrugated, giving the impression that an opening might exist here. Accordingly a sound was introduced, which passed into the uterine cavity. The parts were quite sensitive and rather rigid.

On external examination, it was observed that the bowels were

distended with gas, the abdomen being quite tympanitic on left side, while the uterus lies mostly on right side of abdomen. The fetal heart was heard to the left of the umbilicus, beating 160 times per minute. The pains were short and feeble. She was given one-fourth grain morphia, but the pains became stronger in the afternoon.

In the evening, Drs. Wright and Tate saw the woman in consultation. They could not feel the os, but made out a vertex presentation. An effort was made to break through any adhesions that might exist by forcible rotary movements of the finger, but of no avail. At this time it was very doubtful whether or not the membranes had ruptured, as a napkin placed in contact with the vulva in the afternoon had scarcely been moistened. The labia had become very much swollen. The abdomen was more tympanitic than it had been in the morning. She was given a stimulating enema, and this was followed by an injection of tr. opii, 5j, which relieved the pain.

March 23, 2 A. M. Pains came on every five minutes, strong and bearing down in character. Ordered morphia, gr. $\frac{1}{4}$.

8 A. M. Pulse 86. Pains have entirely ceased. On making a vaginal examination this morning, the septum is found to be pushed over to the right side, and what was formerly a cul-de-sac on left side is now the direct terminus of vagina. No os can be felt; but the uterus feels thinner at this point, and the vertex can be distinctly felt. The fetal heart can be no longer heard. Patient rested well during the rest of the day.

March 24. Pains began to appear again last night.

3 P. M. Os dilated to the size of a silver dime; margins quite rigid.

9 P. M. Os a very little larger; margins still rigid. Can feel protruding through it a slight corrugation of scalp.

March 25. Has been having pains, though not very strong. Is becoming very much exhausted. Os fully dilated; vertex partially descended into the cavity of pelvis. Some fluid has escaped from vagina during the pains to-day, the first since the 23d. Vomited several times during the day. The pains were weak and infrequent; but in the evening the head descended fully within the cavity, a large corrugation of the scalp appearing between the lips of the vulva. The offensive odor observed in the beginning had persisted, becoming, if possible, more offensive.

At 5:30 P. M. Dr. Wright proceeded to the instrumental delivery of the child. The head was easily delivered; but it was ten minutes later before the body could be delivered, as the uterus did not assist at all by its contractions. Five minutes later, the placenta was removed by the hand from the cavity of the uterus, the latter contracting feebly upon it. During the delivery, considerable dark, very offensive fluid escaped, over half a gallon in all. The child was very much decomposed. The placenta had scarcely any of the membranes attached to it, and on its uterine surface had a brownish discoloration, showing a tendency to decomposition. The pulse was feeble during the operation, and continued so afterward, ranging from 115 to 120 per minute. She was put in a quiet room, and given tr. opii camph. \mathfrak{z} ij. Also was ordered spts. frumenti. \mathfrak{z} ss. hourly.

March 26. Slept pretty well during the night.

A. M. Pulse 110. Surface cool. Tongue moist; heavily coated. Abdomen full and tender. Is quite drowsy. There is considerable offensive vaginal discharge.

P. M. Pulse 98; temperature $99\frac{1}{2}^{\circ}$. Has been having some sour eructations. Tympanitis increasing. Ordered quinia, grs. ij. every three hours.

March 27. Vomited a greenish fluid twice during the night. Hiccoughs occasionally, causing pain in upper part of abdomen. Passes urine in bed without knowing it. Less vaginal discharge, though still offensive.

P. M. Pulse 125; temperature $100\frac{1}{2}^{\circ}$. Vomited several times during the day. Had three offensive, dark passages from the bowels. Occasional cutting pain in abdomen. Tympanitis constantly increasing.

March 28, A. M. Pulse 98; temperature $97\frac{1}{2}^{\circ}$.

P. M. Pulse 100; temperature 99° . Getting constantly worse.

March 29, A. M. Pulse 116; temperature $98\frac{3}{4}^{\circ}$.

P. M. Pulse 130. Suffered very much during the day with abdominal pains. Vomiting and diarrhea continue. Abdomen as tympanitic as a drum; as large as that of a woman at full time.

Died at midnight.

Post-mortem Examination.—Moderate post-mortem rigidity; body well nourished; abdomen very much distended and tympanitic. On opening the abdominal cavity the large and small intestines were found to be very much distended with gas.

The lungs were slightly congested. At the posterior and the upper part of the left lung there were old pleuritic adhesions.

Heart normal; cavities contained some soft coagula.

Kidneys normal.

The pelvic organs were bound together by the results of a recent inflammation. The pelvic peritoneum was covered by a recent exudation, which extended only slightly above the brim of the pelvis, extending higher upon the anterior abdominal walls than elsewhere. The bladder appeared three or four inches above the pubis, but was entirely empty.

All the pelvic organs were taken out together. The rectum was firmly contracted and contained some solid feces. This contraction extended somewhat above the sigmoid flexure, and was in marked contrast with the rest of the bowel, which was so much distended with gas. The rectum was perfectly healthy.

Bladder: Anterior wall thickened, posterior wall thinner than usual. Its entire mucous membrane was of a dark slate color, and emitted an offensive odor. At points there was apparently a false membrane upon it, which was rough and gave a sandy feel to the fingers. The wall of the bladder and roof of the vagina were to some extent destroyed, so that there appeared to be a communication between them.

On opening the vagina, its mucous membrane was found to be everywhere gangrened, shreds of gangrenous tissue hanging down from its walls.

Uterus: Length, five inches; thickness of walls, in thickest part, one inch. The neck was not distinguishable from the body. Its mucous membrane was softened and of a dark slate color, evidently becoming gangrenous. The position of the placental tufts was in the posterior wall, near the fundus and toward the right. This part was softened, and presented much the same appearance as the mucous membrane.

Selections.

The Etiology of Diabetes Mellitus.—In the *Berliner Klinische Wochenschrift* of November 2d, Dr. Schmidt, of Neuenahr, points out that hereditary predisposition has probably more to do with the development of diabetes than almost anything else. Mental anxiety, severe pain, and injuries of various kinds, whether they affect the nervous system or not, seem to be powerless to set up the disease without this inherited tendency. Of 104 patients observed and treated by the author since 1868, and in whom the family history was most carefully inquired into, twenty-two were found to have had diabetic parents or relations; and if those cases had been included in the list in which the parents “believed” that other members of their family had been similarly affected, but were not absolutely certain of the fact, the numbers would have been much higher. Dr. Schmitz remarks with truth how little many persons know of their relatives’ illnesses, and quotes Seegen’s observation that many cases of diabetes are probably never recognized. Of the twenty-two patients in whom the disease was hereditary, the grandfather of one was diabetic, and the father and grandfather of another. In six cases the father, and in six others the mother and sisters were diabetic, and in eight the sisters only. Dr. Schmitz, however, only looks on hereditariness as a predisposing cause, and he brings forward several interesting cases to show how the tendency may remain latent for years until some sudden mental trouble or bodily injury calls it, as it were, into life.

One patient, Herr F., fifty-seven years of age, had lost his father from diabetes, but all the other members of his family were healthy. His own health had previously been excellent, when one day a favorite daughter committed suicide in a fit of melancholia. He was almost immediately seized with dyspepsia and intestinal catarrh, and had an attack of jaundice, from which he partially recovered, but soon began to lose flesh and strength, and thirst and polyuria set in. A month later his urine contained 5 per cent. of sugar, and he soon exhibited all the symptoms of confirmed diabetes. His son Franz, twenty-six years old, enjoyed excellent health until, in September, 1871, he fell from his horse, and severely fractured

his left leg. The accident was followed by agonizing pains in the limb during the first few days which succeeded it, and a fortnight afterward the subjective phenomena of diabetes set in, and on examination his urine was found to contain 6 per cent. of sugar. Absolute diet, alkalies, and opium speedily improved his condition, but in June, 1872, there was still about 1 per cent. of sugar present. The remarkable feature of these two cases is, that although the father of one patient, and the grandfather and the father of the other, had both been diabetic, they both remained in good health until a severe nervous shock brought out the latent disease. The suicide of the daughter in a fit of insanity is also worthy of note, because it seems to favor the relation between mental affections and diabetes.

Another interesting example of diabetes following mental anxiety in a patient hereditarily predisposed is given by Dr. Schmitz. A man, aged twenty-eight, always healthy until his present illness, had lost an aunt (mother's sister), a sister, and a niece of diabetes, and his brother was a sufferer from the same disease when he himself came under observation. His father died of typhus; his mother is still alive, and suffers from rheumatic gout. For the last seven years he has worked excessively hard in his father's business without taking proper rest or holiday, and has lately been much worried by unsuccessful commercial transactions. Lately he has developed all the symptoms of diabetes, and his urine contains 1.5 per cent. of sugar.

A fourth case which the author brings forward in favor of his theory of some severe mental or bodily injury being necessary for the development of an hereditary diabetic taint, seems to us less satisfactory on that point than the others. A woman, who had enjoyed good general health with the exception of occasional attacks of diarrhea up to her fiftieth year, was attacked with violent prurigo pudendorum in the autumn of 1871, and the irritation became so frightfully severe that for eight months she scarcely slept at all, and was, according to her own account, almost driven out of her mind by it.

In the spring of 1872 she had all the symptoms of diabetes, and sugar was found in her urine; but as the summer came on, the prurigo diminished, and the diabetic symptoms became coincidentally less pronounced. Under treatment with opium and valerian the patient improved, and both prurigo and diabetes became remarkably reduced. There was always, however, an increase of sugar in

the urine with increase of the prurigo. It should be mentioned that the patient's mother and four sisters were all diabetic. Dr. Schmitz explains the case as follows: The first onset of the disease was due to the mental prostration and shock caused by the prurigo pudendorum, and each subsequent exacerbation of the diabetic symptoms was likewise due to the nervous condition (*Nervosität*) set up by a fresh outbreak of prurigo. Dr. Schmitz, therefore, makes the diabetes secondary to the prurigo, while we should rather look on the prurigo as secondary to the diabetes. Prurigo pudendorum is a common accompaniment of that disease in women, and to our own knowledge it is the symptom which often leads to the first examination of the urine and the discovery of sugar in it; and it is to the presence of this sugar, and the irritation which it excites by its contact with the genitals during and after the patient's frequent acts of micturition, that the prurigo is due. The simultaneous increase and diminution of this distressing symptom and of the percentage of sugar in the urine is explained equally well on this theory as on that of Dr. Schmitz. The hereditary predisposition is clear enough in this case, but not the determining cause.—*Medical Times and Gazette.*

New Researches on Diabetes.—We learn that Dr. Pavy has obtained some experimental results which are likely to throw a new light on the subject of diabetes. He has found that the injection of defibrinated arterial blood into the portal system occasions a saccharine state of the urine. In one experiment, the urine after the operation contained fifteen grains of sugar to the fluid ounce, and in others the quantity has amounted to nearly the same. In the counterpart experiment of injecting defibrinated venous blood into the portal system, the urine showed no signs of the presence of sugar. It thus appears that oxygenated blood passing to the liver causes an escape of sugar from the organ, and thence an accumulation in the system and discharge with the urine. It also appears that through the medium of the respiration of oxygen he has succeeded in inducing a sufficiently oxygenated state of the blood to similarly give rise to the production of saccharine urine. He has further found that through the agency of the inhalation of puff-ball smoke an immediate and strongly diabetic state may be induced, and that the effect is accompanied with such a modification of the circulation that the blood flows through the vessels, as is the case after section of the sympathetic, without becoming de-

arterialized. His experiments, he considers, suggest that in diabetes of the human subject, the blood, in consequence of vaso-muscular paralysis, is allowed to reach the portal vein in an imperfectly dearterialized condition, and thus determines the escape of sugar from the liver. We understand his results are to be brought forward at the Royal Society as soon as its meetings commence.—*London Lancet.*

The Independence of the Savage.—Describing the Mantras, indigenous of the Malay Peninsula. Père Bourien says: "Liberty seems to be to them a necessity of their very existence;" "every individual lives as if there were no other person in the world but himself;" they separate if they dispute. So, too, of the wild men in the interior of Borneo, "who do not associate with each other;" and whose children, when "old enough to shift for themselves, usually separate, neither one afterward thinking of the other." A nature of this kind manifestly precludes social development; and it shows its effects in the solitary families of the wood-Veddahs, or those of the Bushmen, whom Arbousset describes as "independent and poor beyond measure, as if they had sworn to remain always free and without possessions." Of sundry races that remain in a low state, this trait is remarked; as in South America, among the Araucanians, "the Mapuché is impatient of contradiction, and brooks no command;" as, according to Bates, among the Indians of Brazil, who, tractable when quite young, begin to display "impatience of all restraint at puberty;" as among the Caribs, who were "impatient under the least infringement" of their independence. Sundry of the Hill-tribes of India, too, exhibit a kindred nature. The savage Bhils have a "natural spirit of independence;" the Bodo and Dhimal "resist injunctions injudiciously urged, with dogged obstinacy;" and the Lepchas "undergo great privations rather than submit to oppression."—HERBERT SPENCER, in *Popular Science Monthly for January*.

Landois on the Formation of Fibrin from the Red Blood-Corpuscles.—In a second part of the same paper, M. Landois describes the formation of fibrin as being dependent on the dissolved corpuscles. If a drop of defibrinated rabbit-blood be brought into a drop of frog's serum, the cells aggregate together, and become sticky on their surfaces. The cells soon become globular, and those cells lying toward the periphery allow the blood-coloring matter to pass

out. This discoloring gradually extends toward the center of the drop, and at last only a heap of stroma remains. The stroma-substance is very tough and viscid. At first the contours of the cells can be detected; and, when the stroma has been agitated to and fro, the cellular contours disappear, and viscous fibers and stripes are observed. Step by step the formation of fibrous masses from the dissolved mammalian cells can be observed. The author thinks this fibrin should be called "stroma-fibrin" in opposition to the ordinary fibrin or plasma-fibrin, which is formed without solution of the blood-corpuscles. The two kinds of fibrin may possibly be chemically distinguished from each other. In transfusion, if dissolution of the cells occur, then, of course, the formation of stroma-fibrin may take place. The coagulation occurs the sooner, the more serous the blood. Animals in a state of asphyxia, into whom heterogeneous blood was introduced, showed the most extensive coagulation.—*London Medical Record*.

Paulowsky on the Course of the Fibers in the Posterior Commissure of the Brain.—In Siebold and Kölliker's *Zeitschrift für Wissenschaftliche Zoologie*, vol. xxiv., Heft 3 (September 16, 1874), Dr. Paulowsky records the result of his investigations into the structure of the so-called posterior commissure of the brain. This body has been variously described; most authors, however, believing that its fibers run transversely between the two thalami optici, thus serving to connect the two hemispheres of the brain. According to Arnold, the commissure really consists of two factors, one of which belongs to the "Schleifenregion," the other to the hemispheres. [The "Schleife" answers to the *lemniscus* of Reil. The first factor probably answers to the commissure of Wernekinek. —*Rep.*] Luys has remarked a crossing of the nerve-fibers in the commissure. Meynert describes this structure as the crossing place of the anterior and posterior crura of the corpora quadrigemina, which, after crossing, pass over into the tegmentum ("Haube") of the crus cerebri. Besides this, it is in communication with the pineal gland and the "ganglion habenulæ."

Dr. Paulowsky made his observations on preparations from man, sheep, dogs, and rabbits. He arrives at the following conclusions:

1. The so-called posterior commissure consists of coarse fibers running down from the brain to the tegmentum of the crus cerebri.

2. These fibers have a fourfold origin—

(a) In the pineal gland.

(b) In the frontal lobe of the brain (through the anterior peduncle of the thalamus).

(c) In the temporal lobe and in the fissure of Sylvius (through the interior peduncle); and.

(d) Probably in the thalamus itself.

3. In the tegmentum, one portion of the bundle of fibers runs with the "Schleife," while another lies to the inner side of the same.

4. Commissural, or bridge-like fibers, do not exist at all in the posterior commissure.

5. Therefore the term "commissura posterior" is an incorrect one, and it would be more advisable to call this region of the brain the crossed tract of the tegmentum—"tractus cruciatus tegmenti."—J. H. GALTON, in *London Medical Record*.

Passage of a Scissors through the Abdominal Walls after being swallowed.—Dr. H. B. Sands presented a scissors five inches long, which had been swallowed by a patient in a lunatic asylum. The history of the case was given him by Dr. Edward Farrel, of Halifax, N. S., and was substantially as follows:

The patient was afflicted with suicidal mania, and stated that she had swallowed a scissors; but, inasmuch as she was addicted to lying, she was not believed. Some time after this she complained of pain in the right side above the umbilicus, and to the right of the median line. A tumor appeared which was poulticed; an ulcer formed, and it was then found that the points of the scissors were protruding. Sponge-tents were introduced to enlarge the opening, but, from threatened peritonitis, their use had to be abandoned. From this opening intestinal and biliary matter came away, which showed a communication with the pyloric extremity of the stomach, if not the small intestine. It was found that the scissors, as presenting, could not be removed; but, by unfastening the rivet, one blade, then the other, was successfully removed. The blades were five inches long and three-fourths of an inch wide.

Twelve hours after the exit of the last blade, there was no trace of biliary or intestinal matters; and in two days the wound had completely healed up, and very shortly after she was perfectly well.

The patient also stated that she had swallowed the plug of a bath-tub some time previously, and found it to pass by the rectum without any difficulty.—*Proceedings of N. Y. Pathological Society.*—*N. Y. Medical Journal.*

Hostetter's Bitters took their origin thus : Hostetter is a Greek, who came to America a long time ago, and if he is alive yet he must be quite old. He served as a bar-tender some time at Natchez, Miss., and made a drink which was very palatable to his customers, and they would visit his bar and call for his bitters. Lawyers and merchants and planters from the adjacent country would call for them; and after a time some of the wealthy men got him to put up bitters for them by the gallon or demijohn, which they took home and used for a common drink. The bar-keepers on the famous steam packets had such frequent calls for Hostetter's Bitters, that they had to call on him to supply them with the drink in kegs full. These evidences of their popularity induced him to go fully and regularly into the business, and his name soon became notable. He had an establishment a while in New Orleans, and soon found men with money to aid him, when he opened a large house in Pittsburgh, Penn., where he still supplies his bitters in immense quantities. Of late years, I observe that he styles himself doctor in his advertisements, but I never have learned what medical college conferred the degree on him.

It is needless to say his bitters, for which he claims such great medical virtues, are made of ordinary cheap whisky, with a little bitter decoction and essence of orange-peel. He and his partner, Smith, if he is a real personage, have made quite a fortune out of the bitters, and could retire from the business and have enough to live on.—*Southern Medical Record.*

Dr. Klein's Researches on the Typhoid Germ.—The interesting observations of Dr. Klein on the subject, to which Professor Tyndall has prominently directed public attention, have been briefly summarized recently in the *Medical Times and Gazette*. Sections of the hardened ileum of typhoid patients show, according to him, that an active absorption of peculiar organisms goes on in the mucous membrane over, and especially around, the Peyer's patches. These organisms are carried thence into the lymph-canals and the venules of the mucous membrane. In the earliest case which he examined, where death had occurred on the seventh day after the

first appearance of headache, the crypts of Lieberkuhn were found to contain peculiar greenish-brown spheroidal corpuscles of very variable size, the largest being twice or three times as big as a human red blood-corpuscle, and the small ones only half or a quarter as large. Where these bodies lie closely grouped together, as is generally the case, they appear of a dark olive-green color; and the corpuscles at the edge of such masses, or where they are completely isolated, exhibit transitional forms, due to incomplete subdivision. Similar corpuscles are found in the tissue of the mucous membrane, where they appear to be contained in the lymphoid cells of the adenoid tissue. The minute veins, and also some of the lymphatic vessels, contain large numbers of them, and in the former they subdivide rapidly, so as to form greenish-yellow granular micrococci, arranged in groups of two or four, as well as in rings and other figures. The micrococci have their origin in a mycelium whose filaments are branched and apparently smooth, and of a greenish-yellow color. These organisms occur not only in the neighborhood of Peyer's patches, which are moderately swollen, but also in parts of the mucous membrane which to the naked eye show no alteration except slight general swelling, although microscopically the follicles of the patches in one case were found to have undergone the following changes: The central part of the follicle, especially where it lies in the submucous tissue, was converted into a spongy substance by the formation of spaces around its blood-vessels, their wall consisting of the adenoid tissue with which the latter are sheathed. The lymphoid cells of this tissue were converted into large granular bodies containing two to five, or even more nuclei, which greatly resembled the nuclei of endothelial cells. In several of the follicles true giant-cells were seen. In a later stage (twelfth day), the mucous membrane itself showed somewhat similar changes, and the multinuclear lymphoid cells were found in its venules and in those of the submucous tissue, as well as in the lymphatics of the latter. Dr. Klein is unable at present to give a decided opinion whether the above alterations are directly dependent on the presence of the micrococci, or whether they must be considered as secondary to changes in the vascular system. The passage of micrococci inward from the free surface of the intestine can be traced through the epithelium into the substance of the mucous membrane, and especially toward the crypts of Lieberkuhn; and this occurs in parts which are at some distance from the swollen Peyer's patches, and which appear nearly or quite unaltered to the naked eye.—*The London Medical Record*.

On Jaborandi.—This drug, a native of the interior of Brazil, brought thence by Dr. Coutinho, of Pernambuco, has lately attracted considerable attention in Paris. It consists of the leaves and small branches of a shrub which possesses an agreeable and powerful aromatic odor. Dr. Gubler and M. Rabuteau confirm Dr. Coutinho's statement concerning its powerful diaphoretic and sialogogue properties. The dose is from 30 to 90 grains infused in boiling water. The patient should drink the infusion with the suspended leaves, then go to bed, and cover himself with warm clothing.

M. Rabuteau took about 43 grains, and in ten to fifteen minutes his forehead became moist; and soon the sweating became copious, and was accompanied by abundant salivation, which continued nearly two hours. The sweating and salivation simultaneously declined in about one hour and a half. Sometimes the sweating continues four or five hours, and is often extremely profuse. It is said, too, that the bronchial secretion is increased. Dr. Gubler says that this drug sometimes produces diarrhea.

Mr. Martindale, of 10 New Cavendish street, was fortunate enough to obtain some of this interesting medicine, which he kindly placed at our disposal. We made four experiments on three healthy lads, with a slight exception to be noticed further on, of ages varying between 8 and 12. We gave 30 grains of the infused drug with the dregs, and kept the lads in bed covered with their usual amount of bed-clothes. We carefully examined the effect of the medicine on the sweating, salivary and bronchial secretions, the pulse, respirations, and temperature. The lad on whom two experiments were made was slightly feverish; that is to say, on one day his temperature rose to 99.6° in the rectum, and on the next observation 99.4° . In two of the experiments the temperature was taken under the tongue. In the other two, both on the same lad, the temperature was taken in the axilla and the rectum.

It will be noticed that the results of our observations differ in some slight and unimportant particulars from those of the French observers. In three instances the drug produced perspiration; one lad's skin remained quite dry throughout the experiment. In two of the lads, perspiration set in in ten to fifteen minutes; in the third case it was delayed for thirty-five minutes, becoming profuse in from twenty to thirty-five minutes, and continuing thus from thirty minutes to an hour and a half, and then remaining slight

from two to four and a half hours. There was some salivation in all the experiments, and in two cases it was profuse; but in the lad on whom two observations were made, the effect on the salivary glands was very slight. The salivation was much more profuse in the lad whose skin remained dry. The salivation, when it occurred to a marked extent, began simultaneously with the sweating, was greatest when the sweating was most profuse, and lasted as long as the sweating. When the increase of the saliva was but slight, it was difficult to tell where the increase began, and how long it lasted. In the case of the lad who failed to perspire, the salivation became profuse in fifteen minutes, and so continued during three hours and a quarter, and then in a less degree for seven hours. We noticed an increase of the bronchial secretion, indicated by a loose cough, only in the lad, previously quite free from catarrhal symptoms, on whom two observations were made, and in whom but a slight increase of salivary secretion occurred. The bronchial secretion was much more abundant in the first than in the second observation; indeed, in the second there was very little cough. In each observation a decided fall in the temperature occurred. In two cases accompanied by sweating, the fall amounted to 1° Fahr., and in another, likewise accompanied by sweating, it reached 2.6° ; but as this observation was begun in the afternoon and continued until the evening, it is impossible to tell the proportion of the fall assignable to the medicine and to the natural diurnal fall which, in children of 10 to 12, usually begins between four and five o'clock.

The reduction of the temperature persisted for the rest of the day; but in the two morning observations, the lowest temperature was reached about an hour and a half after the administration of the medicine.

In one case, the fall began immediately; in another case, in forty minutes; in another instance, in eighty minutes.

In the lad whose skin remained unperspiring there was a fall of 0.6° , which, beginning forty-five minutes after the administration of the medicine, lasted only two hours and a half.

In each experiment the pulse became considerably quicker, the increase varying from forty to fifty beats. The pulse reached its quickest in from twenty-five minutes to eighty minutes after the administration of the medicine. The quickened pulse continued more than four hours. No close relation existed between the rapidity of the pulse and the fall of temperature. The medicine caused the heart to beat against the chest with increased force, and

produced distinct throbbing of the carotids, and the pulse became full and quick. In one lad, whose pulse was intermittent, the medicine entirely removed this irregularity.

In those instances in which sweating took place, the face became flushed, and was most marked when the perspiration was greatest. The flush involved the cheek and ears; but soon it passed away, and was succeeded by pallor, yet the perspiration continued very free.

In three cases the medicine produced considerable drowsiness, the lad falling asleep during the observations. They were also a little sick, faint, and prostrate. The lad who failed to perspire, vomited. The perspiration, therefore, was not due to the nausea, nor indeed did they complain of it. The vomiting came on suddenly, and was not repeated.

To sum up our results: In three out of the four experiments, jaborandi caused copious perspiration. In one lad the skin remained quite dry, affording an interesting evidence of the effect of idiosyncrasy; for, on the same day, in the same ward, the same dose was administered to both lads, placed under the same conditions, yet, whilst one sweated profusely, the skin of the other remained dry.

Jaborandi acts as a sialogogue, causing in some a very great flow of the salivary secretion; but its sialogogic is less uniform than its diaphoretic action.

In one case only did it increase the bronchial secretion,

Jaborandi considerably accelerates the heart's action and renders the arterial impulse more visible; but whether this is due to increased force of the heart's action, or to relaxation of the arterial system, our observations were not exact enough to determine.

In each observation the temperature fell considerably. Now, this fall is not due to the natural diurnal changes, for by other experiments we have ascertained that between 9 A. M. and 4 P. M. the temperature remains remarkably constant; and that when it does vary between these hours it generally rises. The action of jaborandi on the skin affords the most plausible explanation of the fall of temperature. We have seen that it causes flushing in the face, and probably, therefore, increases the flow of blood to the skin generally, and induces profuse general perspiration. These two circumstances must cause loss of heat, by increased radiation and vaporation. Against this view, however, it must be stated that in the case of the boy whose skin remained dry, a decided fall of

temperature occurred. It may be said that in this case there was increased insensible perspiration, which somewhat reduced the temperature; that, in fact, jaborandi did affect the skin, but to an extent insufficient to render the perspiration visible. Moreover, the fall of temperature was less and lasted a much shorter time than in the cases where the perspiration was copious. In the lad with the dry skin, as there was no flushing of the face, there was probably less determination of blood to the skin than in the other lads.

In all the three lads the drug excited vomiting, but with scarcely any nausea. It produced drowsiness, which supervened soon after the flush disappeared from the face, when the skin became very pale, and a little prostration set in. The perspiration continued profuse long after the flush had left the face and ears.

One unexpected result was obtained. In the lad who was subjected to two experiments, the temperature was taken in both axilla and rectum; and the axillary temperature during part of the observations was higher than the rectal; and, though frequently tested, on no occasion did the rectal temperature exceed the axillary. The thermometers were compared and found to be exactly alike. This fact is certainly singular. On former occasions, one of us made numerous observations regarding the rectal and axillary temperature, and found that in many people, if proper care was taken, the axillary temperature was as high as the rectal. This statement is opposed to Dr. Parkes' observations. It would appear, however, that in this respect there are individual differences. On no occasion was the temperature depressed below the limits of health.

It has been asserted on high botanical authority that jaborandi is composed of the leaves and small stems of a rutaceous plant, the *Pilocarpus pinnatifolius*. Mr. Martindale obtained a fresh specimen of this plant from Kew Gardens, dried the leaves, and we administered 30 grains, as an infusion, to a lad about twelve years old; but the drug produced no effect. It may be that when grown in this country the plant fails to develop its active medicinal properties. Moreover, the *Pilocarpus pinnatifolius*, when dried and powdered, did not possess an odor like that of jaborandi. Mr. Martindale, so well and justly known as a pharmaceutical authority, and who has published a paper on this subject in the *Pharmaceutical Journal*, considers that the plants are not identical.—SYDNEY RINGER, M.D., and ALFRED GOULD, M.B., *Univ. Med. Schol., L.R.C.P., in the Practitioner.*

Editorial.

During the present month nearly all the medical colleges in this country have their commencement exercises. This is the time patiently and wishfully looked forward to by at least three thousand young men, when they will have conferred upon them by the properly constituted authorities the coveted degree of Doctor of Medicine. To many it will be as the beginning of a glad new year, in which they will enter with renewed enthusiasm, determined to win their way to success by a diligent prosecution of their studies, making investigations in the domains of science, and having a firm and abiding faith that well-directed labor and study will bring both honor and financial reward to those who are really worthy. A very few—two, three, or, may be, five in every hundred—will attain eminent success in their chosen profession, and will, in the course of time, be quoted as authorities in the profession. A larger number, probably twice as many, will attain financial success and a local celebrity. May be one-half of the whole number will become neighborhood physicians, honorable men, filling their places with credit to themselves and to their calling, and being men of superior education, will, to a considerable extent, mold the opinions of their neighbors and patrons. Especially will their influence be felt in connection with the public health. They will be required to investigate the causes which produce certain diseases, as well as to apply the remedy. In matters pertaining to general educational facilities, and the proper amount of study the children may safely undertake to accomplish, the neighborhood physician will very frequently be required to give an opinion.

A large number of young men who receive their degree will at once enter other pursuits, turning their backs on their studies and the profession they have fitted themselves to enter. A few will locate, and failing to realize their anticipations in acquiring practice, will, at the end of a few months, take in their signs and seek some other employment.

The medical colleges have in the past and are continuing to do a great and important work for this country, in educating a large body of young men, who go forth singly into communities, where

they become a power that is felt by those who surround them. These colleges should be numbered among the great institutions of learning in which we delight to say our country abounds.

Nearly every scientific man of eminence of any age, from the days of Hippocrates to the present time, has rejoiced in the title of doctor of medicine, and since the establishment of medical colleges they have received their degree from those institutions. Since they are undoubtedly to be considered benefactors of the people at large, as much as any literary college, school of theology, or other departments of science, we are convinced that they should be endowed. A college having endowed chairs, in which the professors are freed from anxiety in regard to the financial success of their college, will, all other things being equal, give a better and more satisfactory course of instruction than its neighbor, whose success in attracting students is due to a considerable expenditure in advertising the college, with the professors dependent for their remuneration on the number of tickets they are able to sell.

We are glad to see that medical men are beginning to realize the importance of appealing to the public for endowment funds that may be used to support those indispensable and worthy institutions, our medical colleges. With endowed colleges we will have a higher education and a comparatively better qualified body of men in the medical profession.

Elevating the Standard.—The University of Michigan is on the way to more severe requirements for admission to the medical department. During the present year, all applicants have been required to present themselves before the Dean of the Faculty, who inquires into their educational history and advantage, receiving from each a written statement, made in his presence, to be preserved as a matter of record. If he is not satisfied as to their qualifications for admission, they appear before the whole faculty, and are more fully examined, and, if judged not qualified in literary and general acquirements, they are refused admission.—*Ex.*

There are those, we are aware, who deny the use of such works, and even sneer at persons who may honestly say a kindly word of them. The conspectus and the compend are a natural outgrowth of the present American system of medical education. Until this is changed, the average student will be forced to resort to some extra means to keep up in his classes, and none so easy as that afforded by the

kind of work under consideration. He will naturally avail himself of it, and the sale of the conspectus will still continue. There seems to us but one way out of the evil, and that is through a total change in the present plan of medical teaching. The schools must align themselves with Harvard, and resolutely imitate her example. Then, and not till then, will the voice of the conspectus cease to be heard in the land; and the student no longer needing it, the occupation of its maker will be gone. The course pursued in Harvard, and that course alone, leads away from this class of works and tends to make its men thorough. The course in the other schools drives the student straight into the embrace of the conspectus, and, unless he be uncommonly strong, tends to make him a smatterer.—*American Practitioner*.

In the right Direction.—A school for the instruction of midwives is in successful operation in St. Louis. As much ought to be said of Cincinnati. A very large proportion of obstetrical cases are attended in both city and country by women who are competent to attend only cases of natural presentations and where the labor proceeds without untoward accident. But as there are always occurring cases of difficult labor, and that are fraught with danger to both mother and child, it is necessary that these women who practice midwifery should have additional instruction to that which they usually obtain.

In connection with such a school, there should be a course of instruction given to nurses, with a register kept that would designate where those who are not engaged may be found. We have frequently found it difficult to secure the services of a competent nurse. We know, further, that no inconsiderable amount of mortality among lying-in women and their infants is to be attributed to ignorance and want of skill on the part of the midwives that are called to take charge of the cases.

Origin of Scirrhus.—S. Wolfberg, of Erlangen, has satisfied himself that scirrhus of the breast originates in the epithelium, either of the alveoli of the gland or of the excretory ducts, the former epithelium presenting the glandular, the latter the columnar form. The connective tissue of the gland participates under very various forms in the growth of the tumor, but the endothelium of the lymphatics is not implicated.—*Virchow's Archiv*, Bd. lxi., p. 241.

Reviews and Notices.

Contributions to the Annals of Medical Progress and Medical Education in the United States, before and during the War of Independence. By JOSEPH M. TONER, M.D., Washington, D. C.

This pamphlet of 118 pages is one of the most interesting contributions to medical literature that has been placed in our hands for a long time. We find, by reference to page 99, that in the year 1769, there were five professors constituting the faculty of the Philadelphia Medical College. Out of curiosity we looked through the advertising pages of our Philadelphia exchanges since January 1st, to see what progress had been made, by increase of teachers and method of instruction, in the venerable schools of medicine in that city. To our surprise we could not find even a card stating that such institutions existed, even in name. By extending our researches to the *New York Medical Record*, we ascertained that there actually are two medical colleges in the good Quaker City—one, the ancient University; and another, rejoicing in the name of Jefferson. The latter has made some advances, as its card in the aforesaid New York journal stated that its faculty is composed of no less than seven professors of medicine and surgery. We failed to discover the number of professors who compose the faculty of the University, but suppose it has at least kept pace with its rival, and has an equal number of teachers. One of two things is certainly evident: These institutions have been hibernating for a period more than five times as long as Rip Van Winkle lay dormant; or else they are lingering out a miserable existence, from the effects of senile respectability. We imagine the pleasure with which those dignified and eminently respectable professors contemplate the hope that must find an abiding-place in some youthful enthusiastic breast, that the time will come, in the ordinary course of human events, when there will be a few first class funerals; when there will be a return of dust to dust, ashes to ashes, fossil to fossil, and a season of respectable mourning; when there will be a regeneration and a new birth, the sand will be wiped out of the eyes of the powers that be, and those venerable institutions will take on new habiliments, and

begin to teach the young men who go to their city for medical instruction, modern medicine in a modern way.

Further evidence that the Philadelphia colleges are in a state of deep somnolence is the statement, in the card that appears in the New York journal, that the venerable Dr. Joseph Pancoast is still an active member of the Jefferson faculty. Now, we do not doubt but that such was the case when that card was first inserted; but we have a faint recollection that his mind actually became impressed with the idea that he was of a suitable age to retire on his laurels; and further, that he actually carried out such an idea.

To ye professors of medicine in ye city of Brotherly Love, we can not refrain from advising you to beware of earthquakes. They have occurred in other places, may even reach Philadelphia and become epidemic; and, from your long experience, you must know that epidemics of that character are more than likely to prove fatal wherever they occur. This is a good time to set your houses in order.

Diploteratology. By H. BESSE, M.D.

This little book was written in order to give a history of the double child, Minnie and Bessie Findley, that was exhibited in different Northern cities during the early part of the year 1870. Evidently the book is designed for popular reading, as it is written more in the language of a shrewd showman, calling attention to the most wonderful creature the world ever saw, etc., etc. Short histories of other double monstrosities are embraced within the volume. The book contains a considerable amount of information on this subject, and may be read with interest by both physicians and laymen.

For sale by Robert Clarke & Co.

Diseases of the Stomach. Being the third edition of the "Diagnosis and Treatment of the Varieties of Dyspepsia." Revised and enlarged. By WILSON FOX, M.D., F.R.C.P., F.R.S. Philadelphia: Henry C. Lea, Publisher.

"That the American people are a nation of dyspeptics," is a statement we have heard on more than one occasion; and we are sorry to say there is enough truth in the remark to make a work on the subject of diseases of the stomach, by so eminent an authority as our author, particularly acceptable to American practitioners. The book is divided into two parts: 1. Symptomatology

of the stomach; 2. Special diseases of the stomach. The method adopted, of contrasting symptoms which are the result of varying causes, is admirable. The etiology, pathology, and morbid anatomy of the different diseases are fully described, giving the views of all the prominent investigators in this subject, quoting their opinions at length.

The monograph is well written, and being on a class of affections that the general practitioner is daily called to treat, should have a place in his library. We know of none better on the subject.

For sale by Robert Clarke & Co. Price \$2.00

Experimentation on Animals, as a Means of Knowledge in Physiology, Pathology, and Practical Medicine. By J. C. DALTON, M.D.

This little book was written for the purpose of refuting the objections that are being raised in some quarters to making experiments for physiological, pathological, and therapeutical purposes, on inferior animals.

From our stand-point, we should say that such extremely sensitive natures as are those who are endeavoring to stop scientific experimentation on such worthless, howling curs and caterwauling felines as may happen to be called to serve a useful purpose in the hands of some investigator, should be treated with the utmost contempt.

Professor Dalton, than whom there is no better authority, and who has been engaged in teaching physiology by means of vivisections for many years, has most abundantly shown that many invaluable discoveries, that have been the means of saving human life, great human suffering, and loss of limbs, could and would never have been made but for experiments made on living inferior animals. We would be as far from countenancing unnecessary suffering to any living creature as Mr. Bergh or any other man, but such suffering as is generally caused by the true investigator partakes of both the characters, necessity and mercy.

If our readers wish to read arguments of real value, they should get Professor Dalton's book.

THE CINCINNATI
LANCET AND OBSERVER.

J. C. CULBERTSON, M.D., Editor.

VOL. XVIII.—MARCH, 1875—No. 3.

Dr. Acers
Original Communications.

Art. 1.—Osteo Sarcoma of Superior Maxilla—Removal of a large Recurrent Fibroid Tumor from the face, neck, and mouth; returning after an operation performed nearly fifteen years previous, for the exsection of a very large "Osteo Sarcoma" of the right half of the Inferior Maxilla.

By C. S. MUSCROFT, M.D., Surgeon to the Cincinnati Hospital, and Surgeon to St. Mary's Hospital. A paper read before the Ohio State Medical Society.

To make this case perfectly clear, it will be necessary to quote a part of the report of the late Prof. Geo. C. Blackman, copied from the October number of the LANCET AND OBSERVER; for the year 1860:

"On the 2d of July, 1859, Lemuel Hinedon, a negro, aged 30, was admitted into St. John's Hospital, for the removal of the lower jaw, which was affected throughout a considerable extent with the disease known as osteo sarcoma. The magnitude of the tumor caused him to present a frightful aspect. From the history of the case as recorded by Dr. John A. Billings, then resident physician at St. John's Hospital, it appears that nine years before, one of the

molar teeth on the right side of the lower jaw became loose, and was somewhat painful. Soon after he noticed a small tumor on the bone, which, however, gave him no uneasiness. It increased slowly but steadily up to the time of his admission. In some parts the tumor was quite hard, in others it had an elastic feel, imparting even the sensation of indistinct fluctuations. Deglutition and respiration not seriously disturbed, although the power of mastication was nearly lost. On the buccal aspect of the tumor were two small ulcerated patches, through which, he stated, from time to time he had lost large quantities of blood. Just previous to his admission his strength had been reduced by an alarming attack of hemorrhage."

[The report goes on to state the patient was operated upon in the presence of many distinguished members of the profession, and that he had nearly died from the loss of blood, but with this exception did remarkably well, and had recovered his usual health at the end of two weeks.—M.]

"On the 7th day of August, thirty-six days after the first operation," says Dr. Blackman, "I proceeded to remove the remaining portion of the tumor. This consisted of the neck of jaw-bone, with its condyle, which were healthy, but the ramus, with the overlapping structures, were so degenerated and blended that it was impossible to distinguish them. The morbid mass extended deeply toward the root of the tongue. After the division of the integuments, the knife was laid aside; and with the bone gouge forceps I succeeded in breaking up the mass completely, and in extirpating, too, the articulation. The large mass involving the root of the tongue was raised by an assistant, so that I succeeded with less difficulty than I had anticipated in wrenching out the morbid structure. The hemorrhage was readily controlled by the application of the persulphate of iron, as fast as fresh portions were exposed by the gouge forceps.

"Nothing of particular moment occurred during the patient's convalescence, which was rapid. . . . In July last, a year having passed since he came under our treatment, Lemuel was carefully examined by Dr. Foster and myself, and we could discover no signs of a return of the disease."

I will again have to refer to the original interesting report of the late Prof. G. C. Blackman.

Lemuel Hinedon, *alias* Jas. Burns, who states his age to be forty-five years, colored, was admitted into the Cincinnati Hospital, Jan-

uary 29, 1874, and is the same person operated upon by the late Prof. G. C. Blackman on the 2d of July, 1859. He is a man of exceedingly low grade of intelligence; says that the present growth has been coming on a good while. Several physicians living in his neighborhood and knowing him well, say that it has been returning for at least eight or ten years. Although the patient says he is only forty-five years of age, those who have known him from a very distant period estimate his age to be near sixty. His hair and beard are quite gray, and the radial arteries of both wrists are ossified, and he has well-marked senile arcs of both eyes.

On admission the right superior maxillary region was very much enlarged and bulged out, as if by a tumor or expansion within the antrum. This prominence extended from the nose backward, and upward over the front of the malar bone and to the zygomatic arch, which was bulged out by the growth. It was so large as to almost close the right eye, which is affected with cataract and dislocation of the lens. Another part of the same tumor having a hard feel, had taken the place of the right half of the lower jaw, and was firmly attached to the buccal aspect of the cheek and the base of the tongue. This last-described outgrowth from the base of the tongue had extended its attachment behind the right superior maxilla into the maxillary sphenoid space and the maxillary pterygoid space, and was partly attached to the bones at the base of the skull, as well as pressing upon the right upper portion of the pharynx. It was the pressing forward and upward of this part of the growth which gave the right side of the cheek the appearance of being affected by cystic disease of the antrum. Another portion of the tumor, which filled the right side of the mouth, extending forward under the teeth, having the shape of an abrupt cone, the apex of which pressed upon and protruded the lips, giving them a swollen appearance, could be plainly seen when they were open. This portion of the tumor was very red and vascular, bleeding excessively upon the slightest manipulation in examination. On the right side of the cheek, just below and anterior to the parotid region, there was a sugar-loaf enlargement, the diameter of whose base was three inches, and whose height from base to apex was two inches, on which was an ulcerated opening. There was another tumor of a similar shape and character under the chin, but much larger, and inclining rather more to the right than the left side, the diameter of the base being about four inches, and the distance from base to apex not less than two and a half, on

which was another ulcerated spot like the former. He says that excessive bleeding will take place from these ulcers, sometimes one and sometimes the other, to such an extent as to produce fainting.

March 1st. The patient has been kept under close observation since his admission into the hospital. The two external tumors have an elastic feel at their apices, and much of the time discharge a sanious kind of fluid, and vary in size considerably from time to time. The one in the mouth disfigures the face very much, and interferes with mastication and articulation, but does not affect respiration or deglutition. I regard these tumors to be of a recurrent fibroid character, or such as have been so described by Sir James Paget in his most valuable work on surgical pathology, in a recent lecture devoted to recurrent tumors.

When the late Prof. Blackman first operated upon this patient, I regard that he was suffering from the effect of that form of disease at present recognized as cystic disease of the inferior maxilla, and that, although the term osteo sarcoma was used to define the disease by him, I entirely agree with Mr. Paget, who says: "Under the vague name of osteo sarcoma, many include together, and seem to identify, all growths in which bone is mingled with softer tissues. I also regard that in connection with the cystic disease of the bone at the time of the first operation, there existed the commencement of the recurrent fibroid disease. For Prof. B. has already stated that when he removed the remainder of the tumor, on the 7th day of August, "the morbid mass extended deeply toward the root of the tongue, and that the large mass involving the root of the tongue was raised by an assistant, so that I succeeded with less difficulty than I had anticipated in wrenching out the entire morbid structure." This "morbid mass" at the root of the tongue was undoubtedly a recurrent fibroid degeneration, which had continued to grow (although slowly at first) up to the time it was removed by myself, and as will readily be seen from the condition of the patient at the time of the operation, the growth was invading all parts of the right side of the face, even beyond the chin, as well as more than filling the right side of the mouth and extending behind the superior maxilla, and even, as before stated, encroaching upon the base of the skull.

This patient was in the hospital about five weeks before he was operated upon. My reasons for having him under observation so long were these: First, he was brought from one of the suburbs near the river, where he had the benefit of good country air, and I

deemed it necessary to acclimate him to the hospital and prepare him for the operation. Second, it gave me an opportunity of studying the case carefully, and showing it to all my surgical friends and others, as well as to learn their views as to the propriety of operating, none of whom indorsed such proceeding, at least if they did I am not aware they so expressed themselves. One, only, said if he was going to operate on the case, he would first tie the common carotid artery of the diseased side.

On introducing the patient, the remarks made, as to the propriety of ligating the common carotid artery as a precautionary measure, were considered. This seems to have been a favorite plan of the late distinguished American surgeon, Valentine Mott. But I believe the weight of recent authority is on the other side, it having been shown there has followed nearly as great mortality after ligating the vessel as a precautionary proceeding, as has resulted from many of the most extensive surgical operations for removing formidable tumors connected with the neck, face, and mouth. For a concise statement upon this point, the statistics collected by Dr. Norris, and published in the *American Journal of Medical Sciences*, for July, 1847, show the serious character of the operation of ligating the primitive carotid artery; for of one hundred and forty-nine cases, thirty-two were fatal from hemorrhage, cerebral or pulmonary disease. "Here, then," says Blackman, in his reported case, "we have one death in four and seven-tenths cases, from an operation recommended to us by the very highest authority, as a *precautionary* step in the removal of tumors of the lower jaw. The mortality is about equal to that from the latter operation itself—one in four—of one hundred and sixty cases collected by Velpeau."

For further statistics upon the subject of ligating the large arteries, see Blackman's edition of Velpeau's *Operative Surgery*, 2d vol.

I would not like to be understood to say, there are no cases of surgical diseases connected with the parts above alluded to, in which the ligation of the primitive carotid would be improper, yet they are not common. *In this case I decided not to use the ligature.*

The operation was done on the 5th day of March, in presence of the hospital staff, most of the leading surgeons of the city, and others from a distance, as well as a large number of medical students, who were attending the different colleges.

The patient being brought under the anæsthetic influence of chloroform by Dr. Wm. Carson, a member of the staff, who kindly consented to administer it, the operation was commenced by making an incision immediately below the zygomatic process of the temporal bone, in front of the ear, and carried downward and forward to the right commissure of the lips. The flaps were then freely dissected up, and the outside of the tumor exposed, the morbid growth having thoroughly infiltrated itself into the surrounding substances of the cheek. The tumor within the mouth and behind the superior maxilla was more than large enough to fill the outspread hand, by which I tried to wrench it out; but not being able to accomplish this, and fearing I could not control the hemorrhage should I dissect, it was then attacked with the bone gouge forceps and rapidly torn from its attachments behind the jaw. This was the work of less than a minute, so rapidly had I to use the instrument, and yet the patient lost more blood than I have ever seen flow in the same length of time. A friend who was present said that the torrent was sufficient to run a mill-wheel. For its arrest I had prepared about a dozen pieces of fine sponge, each a little larger than a hen's egg, well saturated with a solution of Monsell's persulphate of iron. These were rapidly forced into the cavity made by the instrument, so as thoroughly to compress the bleeding vessels and to close up their mouths by the coagulating influence of the styptic. Another and very beneficial effect of the application of large quantities of the solutions of the persulphate or the perchloride of iron is also to freely cauterize and char the raw surface made by the tearing away of the morbid growth, and in this manner closing for a considerable distance the otherwise open vessels, and it is from this effect we get so much benefit. No vessels were tied in the operation, nor was there ever the slightest bleeding afterward. The wound was left open until the afternoon. Upon attempting to close it, I had the greatest possible difficulty in doing so, as the edges made by the first incision were so infiltrated with bony matter that it required much force and caution to pass the needles through them. I first tried to bring the parts together with strong, steel *acupressure* pins, but in no instance could I get them to penetrate, every one breaking before they would pass through.

After removing the tumor from the inside of the mouth, it was found to contain a considerable quantity of thick, dark glary fluid, which was incysted. Part of it also consisted of bone. The loss

of blood was so great that any further attempt to remove the other tumors occupying the side of the face and chin was abandoned for the time being ; but this was all I expected to accomplish at this proceeding, and I was very glad to see the patient, who had fainted, recover from the effects of the shock produced.

As to the propriety of removing large tumors of this nature at different times, we have the best authority, as well as the dictation of sound judgment, and I agree perfectly with the doctrine laid down by Blackman, Deiffenbach, and others, as the former, in the report of his case, says : " The difficulties encountered in some of these tumors must deter any prudent surgeon from the attempt to complete the task at a single operation."

The patient continued to do well after the operation ; the incision in the face was healed except near the angle of the mouth, but as the healing process went on, the bony tissue in the parts became absorbed, and they resumed their natural soft consistence. He suffered but little inconvenience from the effects of the operation, so that on the 15th day of April, the second was performed.

The second operation of myself, and the fifth to which the patient had been subjected, was, like the last, done in presence of the hospital staff and many members of the profession. Chloroform again having been administered, an incision was made on the right side of the face, commencing at the posterior part of the tumor near the corresponding angle of the jaw, and extending in a curved line round the lower part of the cheek, through the base of the second tumor, beyond the median line on the left. The integument was then dissected up from the tumors, and the principal parts of them removed by the knife, but there was a large process connected to the root of the tongue, which I deemed best to tear away with the bone gouge forceps. The hemorrhage in this operation was not at all profuse, it being expedient to tie but two small arteries, and one of these to the left of the median line. The bleeding from the base of the tongue was arrested by the use of the solution of the persulphate of iron applied on sponges. In removing the part of the tumor connected with the remaining left half of the inferior maxilla, the broken end of the bone remained precisely in the condition it was left after the first operation of Prof. Blackman, the detached portion having been removed at that time by the strong bone gouge forceps, or nippers, and not sawn off.

Both of the tumors removed at this operation were cystic in character, and like the last one, contained a thick, dark, glary fluid.

The base of each was fibrous in consistence, and the same form of degenerated tissue extended from a short distance in front of the ear of the right side, occupying all of the same side of the face as low down as the neck, and extending under the chin beyond the median line.

A few days after the operation, a large part of the lower flap sloughed and came away, the parts previously having been brought together by the interrupted suture. After this the patient did well, but from the loss of tissue a plastic operation had to be performed to close the very large open space that had been left. This succeeded only in part, and had to be again repeated in the course of two weeks, and when it was nearly healed, and the patient about to be discharged, he was suddenly attacked with phlegmonous erysipelas of the face, the seizure being the most severe and sudden I recollect ever to have seen. He was visited regularly every day, and I was rejoicing in the triumph achieved, to have gotten my patient through four such terrible ordeals, when to my astonishment, after leaving him at my last visit cheerful and happy, I found him with swelling of the upper part of the right side of the face and a pulse beating at the rate of one hundred and forty to the minute, and an accompanying heat of surface of one hundred and six and a half degrees of Fahrenheit's thermometer, the other symptoms being quite as unfavorable. The disease, however, subsided, and he was able to leave the hospital on the 20th day of May, still with the upper part of the right side of the face swollen. There was accompanying this attack of erysipelas, from its first onset, a considerable enlargement of the cervical gland behind and under the right ear, which never subsided, although the lower part of the face had nearly returned to its natural condition, except the great loss of tissue. Since the patient left the hospital I have seen him several times, at each of which the swelling of the face was increasing, as also the glands of the neck before mentioned, and the corresponding gland of the opposite side, as well as others, have become affected; his general health does not decline, but the primitive disease is undoubtedly spreading and returning with greater violence than it has yet done. At the time the patient left the hospital, the wounds from the different operations had entirely healed, except a small space at the root of the tongue, which remained open to the extent of less than an inch in diameter, and this was healing kindly. There is thus far no tendency for the

disease to return at the root of the tongue, the point at which I believe it to have first commenced.

I learned from the very intelligent family with whom the patient lives, that Prof. Blackman performed an operation on this patient about eight years ago, and he then said it would be impossible for him to submit to another. So that there is strong testimony in favor of these tumors having made considerable progress. At that time, as to any history that could be gathered from the patient himself, it would be entirely unreliable.

I hope I may not be considered prosy in taking up so much of the time in reporting this case, but to me it is of so great interest in all its features, especially the pathology, that I have appended a few paragraphs from that great master, James Paget, who, I regard, has so excellently described and properly named this disease.

Speaking of these tumors, he says: "Almost every form of tumor may occasionally present examples of recurrence, so that the distinguishing term I have employed must be understood to express, not the possession of any specific form of structure, but rather a peculiar tendency manifested in the life of the tumor. For it may be accepted as a well-established fact, both in physiology and pathology, that similarity of structure between two or more different parts is not of itself sufficient to determine functional correspondence. The examination, therefore, of any texture, either morbid or healthy, can not be regarded as complete if it is limited to a mere determination of its form, appearance, and structure. Its growth, development, tendencies, influences upon the individual upon whom it occurs—in short, its life—must be attended to. Its theological as well as its morphological aspects are to be considered."

He says also: "The form of tumor in which this property of recurrence is most strongly exemplified, is one which in its structure most nearly resembles the common fibrous tumors, and for it I have proposed the name of 'Recurrent Fibroid Tumor.'"

I hope I will be pardoned for quoting one or two more paragraphs from this very distinguished author, as the description given by him of the recurrent fibroid tumor, is to my mind the description of the character of tumor with which I have had to encounter.

Mr. Paget says further: "Although the various instances of recurrent tumors recorded, present many diversities of structure, yet they may be said generally to have possessed the character of in-

complete development, and to have approximated to the embryonic or rudimental, rather than the perfect state of natural tissues. And this rule of persistent or arrested embryonic structure in the recurrent tumors is so general, that in practice it is advisable to speak with hesitation of the ultimate result in any case in which a tumor is found to be composed of rudimental tissues. This similarity in structure to embryonic texture becomes more strongly marked after each removal and recurrence. So that a tumor, which at first might be not unlike the normal fibrous or glandular texture in which it grew, after repeated removal and recurrence becomes softer, more succulent, and in its latter growths may seem to the naked eye little more than like masses of yellow or ruddy, soft gelatine, with blood-vessels. The latter are usually much more rapid in their progress than the earlier growths. They are generally less well defined, penetrating farther and more vaguely among interstices of adjacent parts, and more quickly protruding through the skin or scars over them.

And in these characters the later formed tumors assume more of the character of malignancy than the earlier. The author, quoting Mr. Syme, "who also expresses a similar transition, describing, as the usual course of the cases he has seen, that after one or two recurrences of the tumor, the next new productions present a degeneration of character, excite pain, proceed to fungous ulceration, and thus in the end prove fatal." So that, although there be cases in which the evil career has not been run, yet I think we may regard these tumors as approximating to characters of malignancy, not only in their proneness to recurrence after removal, but in their aptness to assume more malignant features the more often they recur. . . .

"But the evil result does not by any means follow as a necessary consequence of repeated recurrence of the tumor, for there are many cases now recorded in which the patient retains, to all appearances, perfectly good health, and shows none of the cachexia which would almost certainly exist in a patient who had suffered repeated recurrences of cancer. . . .

"The recurrence of these tumors takes place, not merely in the same organ or tissue, but *in loco*—in the place in which they originally occurred—in the cicatrix or closely adjacent to the scar of the first operation wound. And here again do they possess a character by which they are distinguished from the malignant tumors,

which, in their recurrence, may multiply not only in the same part, but in distant organs. . . .

"Thus we have in these recurrent tumors, characters which connect them on the one hand with the innocent and on the other with the malignant tumors."

In Billoth's Surgical Pathology, he devotes a few pages to a disease called by the name of adeno-sarcoma. The disease there described certainly has many features in common with the case under consideration, and is probably the same. The following microscopic examinations kindly furnished me of these tumors, by Drs. N. P. Dandridge and J. C. Mackenzie, the pathologists of the Cincinnati Hospital staff, I think coincide with those of Théodore Billoth.

Dr. Dandridge says: "The tumor presents great variety of structure in different parts. From the mass occupying the superior maxilla and removed at the first operation, the section exhibits a fibrous tissue, infiltrated in parts by cellular elements. In places there is a more or less regular alveolar arrangement, the alveoli differing greatly in size, and so closely packed with cells as to make it difficult to clearly trace their outline and shape. Again, there is regular gland-like structure, as though the sections were through acinous gland, displaying round or slit-like openings as the ducts were cut at right angles or obliquely. These openings were lined by a single layer of columnar epithelium. At another part there was a papillary arrangement; the papillæ were covered with columnar epithelium, and projected into a spindle-celled and fibrous tissue. This variety of structure was not seen in any one specimen, but was only found after studying a large number of sections. The mass removed from the chin seemed principally composed of a simple, very loose-meshed connective tissue, though here and there a slight infiltration of cells was seen."

Dr. Dandridge was present and assisted me in three of the first operations.

Dr. J. C. Mackenzie makes the following brief statement:

"The tumor presents a very composite aspect. Tubes lined with columnar epithelium, are mingled with tissue containing spindle-shaped cells in abundance, and in some places there are alveolar spaces filled with large granular cells."

July 14th. I have been kindly permitted by the secretary of the Society to withhold this paper to date, so that I can state the condition of the patient, and to what extent there has been re-

newal of the primary disease. I find him in good general health, but the swelling of the glands on both sides of the neck is increasing; the one on the right side has a small sloughing ulcer upon it. There are also two small openings having the appearance of abscesses, one on the side of the forehead, and the other over the zygoma, each of which secretes a purulent discharge; the whole of the right side of the face and forehead are very much swollen. The small open space before mentioned which corresponds to the root of the tongue is not yet healed, but is dry and cicatrizing. There is no return of the disease at either place which was the seat of my operations. The disease is now assuming the character of malignancy, which it has never done before.

It has been a source of great satisfaction and instruction to me to have been able to follow up this case for so long a time—over fifteen years. I was present and assisted in the removal of the first tumor, July 2, 1859.

Art. 2.—Mercury as a Supersedent.

By DOUGAN CLARK, M.D. A paper read before the Cincinnati Medical Society, January 12, 1875.

Mercury, given so as to bring about *salivation*, or, better, *mercurialism*, is “a universal excitant of the tissues.” The circulation is stimulated; the nerve centers are excited; the glandular system, from the liver to the smallest secretory follicle, acts with increased energy under the influence of this powerful drug. But that which constitutes its most important therapeutic property, when considered merely as an alterative, is the strong tendency it exhibits to hasten the metamorphosis of tissue. The term *alterative*, like some others in medical nomenclature, is simply used to cover up our ignorance. Certain remedies are found by experience to be beneficial in disease, while yet their *modus operandi* is totally inappreciable to the senses. These medicines may operate as stimulants of the vital actions, it is true, or as sedatives, or as neither the one nor the other; but their curative action is supposed to depend upon changes entirely distinct from the exaltation or depression which they may or may not produce. We call them, conveniently, alteratives, because they are not classifiable under any other heads; or if they are thus classifiable—as, for instance, mercury might be

called an emetic or a cathartic—yet the main property upon which this classification is founded, as in the case of mercury, is the alterative property.

Now, one mode at least in which alteratives in general, and mercury in particular, may be supposed to act, is by modifying the state of the organic tissues of the body; and this it does, in all probability, by stimulating the process of molecular disintegration, and thereby removing “diseased structure, the place of which is supplied with new structure, either healthy or disposed to become so.” (Wood.) The blood of a mercurialized patient exhibits the buffy coat. Its solid constituents, including albumen, fibrin, and red corpuscles, are appreciably diminished. A fatty matter, of a fetid, offensive odor, is very abundant. The coagulability of the blood is much diminished, and it tends to speedy decomposition. Doubtless these changes are partly owing to deterioration of the blood itself, from a poisonous action exerted by the drug upon its various constituents. But we must remember that patients of this class rapidly emaciate. The solid tissues also are rapidly broken down under the mercurial influence, and their debris are poured into the circulating fluid; hence, in part, the altered state of the blood; hence the fetid matter contained in it; hence the stimulant influence on the glandular system, that the decomposing remains of the disintegrated tissues may be as rapidly as possible eliminated from the system. In confirmation of this view, we may remark that the saliva, under these circumstances, is said to contain more than a normal amount of solid ingredients.

Now, it may be asked, how effects like these can possibly be therapeutical and not rather toxicological? Let us see. Mercury has long had a great reputation as a deobstruent in resolving swellings of the glands, the ligaments, the liver, and various indurations and tumefactions. See how readily this can be explained on the principles above alluded to. The power we claim for mercury, of promoting disintegration, will be exerted of course with greater relative effect on structures of feeble vitality, because these have diminished power to resist destructive agencies. And such are the tumefactions just spoken of. They are, therefore, rapidly disintegrated, and their debris being carried off by the absorbents and veins, the physician supposes that absorption has been directly stimulated by the mercury; yet the fact may be that only molecular change has been increased, and the absorbents excited by the increased amount of material thus subjected to their action.

We may lay it down, then, as a very probable hypothesis, if not indeed a demonstrated fact, that mercury stimulates the removal of old structure without, to the same extent, stimulating the process of repair. It probably causes a more rapid oxidation of the ultimate constituents of the organic tissues. It tends to destruction, and in health, as well as in many cases of disease, it must be ranked as a dangerous poison. But, then, in a large number of cases of a different character, this very same property gives it a therapeutic value which can not be controverted. It removes the old structure in which the disease is situated, and substitutes new structure, which, if not healthy, is stamped only with the character of the mercury itself, which is readily effaced. It cures the disease by killing off the tissue in which the disease exists, while nature rebuilds a new and healthy tissue out of the ordinary nutritive material. In this way mercury may cure inflammation; it may cure fever, and especially it may cure syphilis. The great efficiency of mercury in syphilis seems to be as well attested as any other fact in medicine. And may it not be explained by the principle we have indicated—viz., that this drug promotes the rapid breaking down and removal of the diseased tissue, and supersedes the disease by substituting new tissue not impressed with its destructive characters; and are we not justified, therefore, in designating mercury as a supersedent?

Art. 3.—Two Cases of Syphilitic Lesion of the Nervous System.

By J. P. GREEN, M.D., late Resident Physician at the Cincinnati Hospital.

Read before the Alumni Association of the Miami Medical College, January 7, 1875.

CASE I.—*Paraplegia*.—Wm. W., æt. 32; native of Prussia; cabinet-maker. I first saw this patient in June, 1871, when he applied for treatment for constitutional symptoms, the result of a chancre contracted some eight months previously. The sore, which was on the lateral aspect of the glans, made its appearance some two or three weeks after exposure, and healed in about a month, without treatment, leaving, however, an indurated mass, which remained several weeks longer. At that time the only local evidence of the disease was a tolerably well-marked cicatrix. He was then thoroughly poisoned with the syphilitic virus. There was an

abundant tubercular eruption, of a dull red color, covered with furfuraceous scales, over the face and forehead. Alopecia was present to a marked degree. There were deep ulcers, the bottoms of which were covered with a whitish material on either lateral wall of the pharynx. He was considerably emaciated; had little or no appetite; complexion sallow, and his general appearance was that of an unhealthy cachectic person. The ulcers in the throat were touched, every second or third day, with a solution of argent. nit., grs. xx, to aqua, ℥j, and he was directed to use an alum gargle several times daily, and was ordered the following: R Hydrarg. bichlor. grs. iij; potass. iodid. ℥iv; tr. cinchon. comp. ℥viij. M. ft. sol. Sig. ℥ij ter die. The mercurial was occasionally replaced by syr. fer. iodid.; and a portion of the time, in addition to the other remedies, he took cod-liver oil. He improved very slowly under this course, and at the end of six weeks, although the eruption had disappeared, the throat healed, and the hair stopped falling out, he retained the feeble appearance, had very poor appetite, and had not gained flesh.

I advised a voyage, or at least a change of climate. He went to Germany, and returned in three months, in his usual health and flesh. He was apprised of the danger of relapse, and enjoined to report at once upon observing any evidence of ill-health; but I saw no more of him until January 8, 1873, when I found him in bed and unable to rise, on account of almost complete motor paralysis of both inferior extremities. He had not felt well for two or three weeks; but had noticed nothing like the present trouble till four days previously, when his legs began to get weak. Was able to walk, however, till this morning. The loss of motor power was so nearly complete that he could only move his great toes, and one of them (the right) very slightly. Sensation and reflex action not impaired, nor were the functions of the rectum or bladder affected. The muscles failed to respond to the induced current. There was a deep and unhealthy looking ulcer on the posterior wall of the pharynx, and he was also suffering from a well-diffused bronchial catarrh. The appetite and general health were fair, and the virile power was not diminished. He was placed upon potass. iodid. grs. xl, four times a day, and the ulcer in the throat touched with argent. nit. grs. xx to ℥j of water.

January 10. No change. The potass. iodid. well borne.

January 12. In same condition, except ulcer in throat looks better.

January 14. No improvement. Treatment continued.

January 16. No signs of improvement in paralysis. General health not so good. Pulse 90, small and soft. Appetite poor.

January 18. No better. Appears to be losing ground. Was ordered, in addition to previous treatment, quinia sulph., grs. ij, ter die, and dry friction to paralyzed limbs.

January 21. This morning, in consultation with Professor John A. Murphy, it was decided to continue the treatment, with the addition of strychnia sulph. gr. $\frac{1}{20}$, and hydrarg. bichlor. gr. $\frac{1}{16}$, ter die.

January 24. No change.

January 25. The hydrarg. bichlor. causing nausea, was discontinued, and its place supplied by inunction of ung. hydrarg, over spine, once a day.

January 28. No change in symptoms or treatment.

January 30. Complains of pricking and tingling sensations in feet and legs.

February 1. The tingling mentioned in last note continues, and has extended to thighs.

February 3. Both feet and legs are bathed in perspiration. No further change, save tingling and pricking not so noticeable; and feels occasionally as if some one was pulling forcibly at both feet.

February 5. This morning, for the first time, there appears to be a slight increase of the motor power. Can, with considerable effort, flex and extend feet and legs. The ulcer in the throat is healing and bronchitis almost well.

February 8. Has made some progress toward recovery. Can readily move his feet, and has sufficient power over the muscles of leg to raise the knee an inch or two from the bed.

February 12. Still slowly improving. When sitting in a chair can slide his feet back and forth, but can not lift them from the floor.

February 16. Can stand for a few seconds without support, but can not walk.

February 20. Can walk across the room by the aid of a couple of stout canes.

After this time his convalescence was uninterrupted. By the 10th of March he was discharged from treatment, and toward the last of the same month was able to work all day at the bench; and so far as I am aware, has not lost a day from sickness since. He has,

on two occasions, had a slight return of syphilitic symptoms—once, an ulcer in the throat, and at another time, a tumor, as large as a walnut, appeared just beneath the angle of the right inferior maxilla. Both readily yielded to potass. iodid.; and I recommended him to take a “course” of the same medicine about once in six months, whether he feels well or not.

Remarks.—This case is somewhat exceptional, from the fact of the appearance of the paralysis at so early a period after infection; the rule being, that this form of paralysis is one of the latest phases of constitutional syphilis. The exact seat and nature of the lesion I do not pretend to determine. Whether the trouble resulted from disease of the vertebræ, spinal meningitis, change in the texture and structure of spinal cord, a gummy tumor in the substance of the cord, or interstitial neuritis, affecting the nerves entirely exterior to the vertebral canal, I leave for the decision of others. By no means the least interesting feature of the case is the fact, that although one hundred and sixty grains of potass. iodid. were administered every day, for a period of more than eight weeks’ duration, no untoward effects directly attributable to the drug, were observed. It is true that there was decided impairment of the general health; but it must be remembered that the patient was confined to his bed, and was, at the same time, suffering from a troublesome bronchial catarrh, and from an immense ulcer in his throat, and the responsibility for the causation of his general feebleness must be shared by all these circumstances, and not charged directly to the medicine.

CASE II.—*Hemiplegia.*—Mrs. H., æt. 58; born in Ohio; by occupation a domestic, and a widow for twelve years. On the 12th of December, 1872, I found this patient suffering from almost complete right hemiplegia. The paralysis of motion was nearly complete; the only parts not involved were the fingers, all of which could be slightly moved. Sensation was not diminished; on the contrary, it appeared in some places to be somewhat exalted, this being especially the case on the anterior portions of the arm and forearm. The muscles were not perceptibly atrophied. There was no facial paralysis; but there was an erythematous blush covering the entire left cheek, which was much brighter sometimes than at others, and occasionally would almost entirely disappear for a few days. There was no impairment of speech, and the special senses were intact. Both tibiæ were very much enlarged, tender, and painful, the pain being invariably aggravated at night. There

was also a prominent enlargement of the lower third of left ulna. The post-cervical and inguinal glands were enlarged and indurated. The general health was not impaired. The paralysis had existed for five months; had come on gradually, and been preceded and attended by vertigo and headache. The mind was not and had not been affected. The right eye presented well-marked posterior synechia. The patient remembered to have had an eruption on her arms, breast, and back many years ago, and was at one time troubled with sore throat, she thought about the time she had the breaking out on the skin. I could obtain no history of any initial lesion, and the woman was said to have always sustained an excellent reputation.

The symptoms were considered sufficiently unequivocal to warrant a conclusion that the malady was the effect of a specific cause; and accordingly she was ordered potass. iodid., grs. xxx, three times a day. The stomach at first rejected the medicine; but by decreasing the dose, and giving it half an hour after meals, it was soon well borne, and after two weeks such a degree of tolerance was established that grs. xl could be taken on an empty stomach without inconvenience; and after that time she got the same dose before each meal until she was finally discharged. There was no improvement for nearly two weeks; about which time she began to be able to move the arm and to elevate the shoulder, and shortly afterward some control over the muscles of the lower extremities was noticed. After this the recovery was slow but uninterrupted. At the end of a month she could walk with a cane, and in six weeks could walk across the room without help. At the end of eight weeks the treatment was temporarily suspended, on account of a severe cold brought on by imprudent exposure. At that time she felt as strong in the affected side as ever; but there was a slight limp in her walking which never entirely disappeared, although the treatment was afterward resumed and continued three or four weeks.

She died during the past summer, of acute dysentery, having never experienced any return of specific symptoms.

In this case, as in the former, I neither pretend to accurately locate the lesion nor to minutely describe its character. The potass. iodid., in addition to the nausea and vomiting already mentioned, caused a profuse papular eruption over the arms, breast, face, and back, which disappeared soon after the medicine was discontinued.

The two cases are submitted as instances of not very frequent forms of syphilitic disease. They also furnish additional evidence (which is indeed now scarcely needed) of the wonderful efficacy of potass. iodid. in the cure of the tertiary phases of the disease.

Art. 4.—A Case of Compound Comminuted Fracture of the Bones of both Legs, followed by Recovery without Shortening.

By W. C. CHAPMAN, M.D., Toledo, O.

On the 11th day of March, 1874, I was called to attend Theodore B., who had been run over by a heavily loaded wagon, both wheels having passed over his lower extremities. Hemorrhage had been considerable, but had been arrested before my arrival.

On removal to the station-house and an examination made, both bones of the left leg were found fractured in an oblique direction, about two inches below the knee-joint. The tibia was badly comminuted, one large fragment being freely movable. The upper fragment was driven through the soft parts, forming an opening on the outer aspect of the limb, some four inches below the joint. There was, in addition to this injury, a cut four inches in length, penetrating to the depth of an inch, extending from the insertion of the inner head of the gastrocnemius muscle downward in a longitudinal direction.

When the boot was removed from the right leg, an injury was discovered, an inch and a half above the ankle-joint. Both bones had been fractured somewhat obliquely, at the same time comminuted. Above the external malleolus a large opening had been made, permitting the introduction of a probe to a considerable depth. There was also a small opening upon the inner side of the leg, just above the internal malleolus. In both limbs the circulation was not materially impaired.

Seeing the extent of the injuries, I sent for Dr. Jones, who was in the building, to assist me in caring for the patient. At his suggestion Dr. Woods was asked to allow the use of his "Hammock Splint," as the case was a good one in which to test its usefulness. That gentleman immediately placed the apparatus at our disposal, and with his assistance it was readily applied to the left leg, the one fractured near the knee.

The right leg was dressed with the ordinary splint and bandage, and the patient removed to his home, a mile distant from the station-house. Dr. Reed, the family physician, was notified of the accident, and together we attended the case.

On visiting the patient the day following, he complained of much more pain in the right than in the left leg, and there was so much swelling that Dr. Reed had been called during the night to untie the tapes that held the splints in position. It was thought best, by both of us, to remove the splints entirely; and noticing the ease with which the left leg could be watched and attended to, suspended, as it was, in Woods' splint, we determined, as soon as possible, to apply it to the other leg also. Temporarily a tight-rolled comfort was placed so as to give support to the injury—being held in position by tapes and bandages. In this condition the patient was left, with a promise to return as soon as we could obtain the use of the desired apparatus. Dr. Woods assisted in the application of his "Hammock Splint" to this leg on the 15th inst., four days after the time of injury.

Before proceeding further with our history of the case, we will here mention that our patient was a hard-working German man, thirty-seven years of age; was accustomed to the use of malt liquors, and sometimes drank ardent spirits; was somewhat under their influence at the time of the accident. He has a wife and three children now living.

On our visit on the 16th, we found him with a pulse of 112, temperature 103° ; restless and anxious. Had four or five passages from the bowels during the night. Both legs were swollen, and some pain was experienced in the left knee. Over the surface of both, large blebs existed, filled with serum; these were evacuated by puncture.

On the 17th, febrile symptoms remained the same as the day before. Diarrhea still continued. The swelling in the right leg had somewhat subsided; but the left had greatly increased in size, and was red and hot. No pain was complained of, and both legs were held well in position in the apparatus. Water had been used freely to keep down the inflammation from the time of injury. A little carbolic acid was now added to the water, and the irrigation continued. Astringents and opiates ordered the day before, for control of the diarrhea, were also continued in increased doses. We left, feeling that our patient was in anything but a favorable condition.

On the 18th, the pulse was reduced to 102, temperature 100°, but the diarrhea was still as bad as ever. The redness still continued in the left leg; the swelling in the right one had considerably subsided. Pus was detected deeply seated in the cellular tissue of the left leg; swelling at the knee somewhat subsided. Opium and tannin prescribed, and patient left.

During the next two days, the general condition of the patient remained about the same. Diarrhea, however, was checked to a certain extent, although the discharges were still more frequent than desirable. Two openings were established about the middle of the left leg, on the inner side of the tibia, and through these points of sloughing, purulent matter was discharging in large quantities.

It was just here that the great convenience of the "Hammock Splint" was demonstrated. The purulent matter, as it discharged itself, was allowed to pass through the muslin that held the limb suspended, into vessels placed beneath for its reception. By means of the syphon irrigators attached to the apparatus, cold water could continually wash away any accumulations, and when the strips which formed the bed became soiled, they were easily removed and new ones applied, with no discomfort to the patient or detriment to the injured parts. It would be almost impossible to overestimate the value of the "Hammock Splint" in a case such as we are reporting. Both injured legs were at all times comfortably supported, with extension and counter-extension fully provided for; no movements of the fragments occurring, no matter how often the parts were opened for inspection. The continuous diarrhea compelled the patient to use the vessel many times during the day, but we failed at any of our visits to notice any change in relation to the injured parts.

It is needless to take time and space to detail the daily experience derived from the treatment of this case. We will be content to record the progress of the patient toward recovery in a more general manner.

Suppurative action continued in the left leg until the whole cellular tissue on the inner side of the leg, together with some of the muscular fiber, was carried away. The integument sloughed also, resulting in an ulcer as large as the hand, and almost reaching the bone in depth. Diarrhea continued to a greater or less degree; pulse varied from 90 to 110; temperature always above normal. Wine and egg, mur. tr. iron, quinine, and opium were given, and

great attention paid to sustaining the strength of the patient, by concentrated and nutritious food, in order to counteract the great drain upon the system.

The injury to the right leg not being so severe as the left, although a compound comminuted fracture so near a joint is never a trifling injury, much less trouble was experienced in combating the inflammatory action, and consequently processes of repair set themselves up more promptly than in the other leg. Although there was a constant discharge of pus from the openings on either side, this gradually became less and less, and finally, on the 26th of April, forty-six days after the accident, the bones had united sufficiently to warrant a removal of the apparatus. Three weeks from this time, a spicula of bone, about three-fourths of an inch in length, was removed from the external opening, after which all discharge ceased from that leg.

On account of the destruction of so much of the tissue in the left leg, much longer time was required to repair the injury. However, granulation began, and by the middle of June, the whole ulcer had healed and the surface completely covered by new skin. Up to this time, however, there had been no union of bone in this leg, and it was feared that a resort to surgical interference would be necessary, before such a result would be obtained. Stiffness at the knee-joint was also apprehended, as the limb had remained suspended for ten weeks in an immovable position. It was therefore determined to remove the "Hammock Splint," and ascertain to what extent this might be the case. On May 19th, the splint was removed, and although so long a time had elapsed since the time of injury, there was no stiffening of the joint. Instead of returning the leg to the horizontal position, it was determined to substitute that of the double-inclined plane for a time, and administer phosphate of lime, hoping by this change to hasten the desired union of bone. The apparatus we had received from Dr. Woods could not be modified so as to give the support as desired in this position, so Day's double-inclined plane was substituted. It would be but right to mention here, that Dr. Woods has now so modified his splint that by readjustment the requisite incline may be obtained. If this attachment had been completed at the time, it would certainly have been used in the case.

Fortunately, repair of bone soon began and a perfect union took place, so that in the course of four or five weeks the splint was removed, and gradually the usefulness of the leg returned.

At the present time the patient is walking about with no appreciable shortening in either limb, and unless expecting to walk for a long time, does not use a cane or support of any kind. He will be able to go to work as soon as the weather will permit.

We have reported this case for the reasons that it presents:

An unusual amount of injury, with grave complications, such as in a great majority of cases would prove fatal to the patient, terminating in recovery and good result as to usefulness of the injured parts. Both fractures were compound comminuted, involving both bones of the legs, and in close proximity to large joints. The destruction of soft parts was very extensive, and was therefore a great drain upon the vitality of the patient, especially complicated, as it was, with diarrhea, to a certain extent uncontrollable. The fact that bony union was so long in establishing itself in the left leg, and then going on to a perfect result, was also a peculiarity in the case.

It is but just to mention here the great benefit derived by the patient, and comfort to ourselves, in the use of "Woods' Hammock Splint." It is difficult to say what other apparatus could have been used that would have so fully met the demands of the case. As there were no bandages to remove, daily inspection and cleansing was possible without moving the parts in the least. Extension and counter-extension was kept up continuously, with but little, if any, pain to the patient. And if the apparatus was then completed as it now is, none other would have been necessary from the beginning to the end of the treatment. We think it is by reason of the perfect rest and freedom from pain obtained by its employment, that the life of the patient is to a great extent due.

Correction.—In the February number of the LANCET AND OBSERVER, in the article on "Opium Poisoning," there occurs several errors, as follows: On page 68, *four grains* of quin. sulph. were given hypodermically each time mentioned, instead of $\frac{1}{4}$ gr., as printed. Also, the fifth line from the bottom of page 69 should read, *four grains morph. sulph.* instead of $\frac{1}{4}$ gr., as the text has it.

J. L. N.

Proceedings of Societies.

THE CINCINNATI MEDICAL SOCIETY.

The Society met in regular session, Dr. Walker in the chair. Dr. Clark's paper, on mercury as a supersedent, was discussed as follows:

Dr. Comegys said the doctrine advocated by Dr. Clark was the doctrine which had been advocated for several years past—that of substitution. Dr. Hamilton had claimed for it stimulant properties—stimulant to all the tissues. Dr. C. had continued to use it on an extended scale, as reported by him a few weeks ago. He had recently used the bichloride in a case of endometritis in an anæmic, scrofulous girl, who had been inhibited from society for several years, by feeble health. He had given iron and conium for some time with some benefit, but had not effected a cure. He then gave $\frac{1}{24}$ gr. of bichloride, four times a day. After the administration of $2\frac{1}{2}$ grs., this patient, who had had leucorrhœa, dysmenorrhœa, with scanty menstrual discharge, and distress to such a degree that she was almost bedridden, recovered. He had recently been consulted by a lady from Kentucky, who was suffering from some uterine difficulty. She had severe dysmenorrhœa, with scanty menses. The bichloride was given for the uterine inflammation, with happy results. In a case of chronic nasal catarrh, in which iodid. of potass., cod-liver oil, tonics, and local applications had been resorted to without much benefit, he gave bichloride, which effected a cure. He thought mercury had no special power over syphilis, but acted on that disease as on other inflammations.

As to mode of administration, he thought the bichloride should not be given in the comp. syrup of sarsaparillæ, being decomposed by that vehicle. It should be given in pill or in water.

Dr. Holdt objected to classifying mercury as a stimulant. Its mode of action can not be satisfactorily explained. He thought the views advanced did not agree with the advance in physiology and pathology.

Dr. Clark said he had not intended giving a complete view of the therapeutical and toxicological actions of this article. The only thing he had aimed to show was that mercury promotes molecular

disintegration, thus revolutionizing disease. It does not build up new tissue. A healthy man pyralized, loses weight, emaciates—this from an increased molecular disintegration of tissue.

Dr. Holdt. Suppose one cell in the body is infected by syphilis, by what process will the poison be eliminated? We do not know what the infecting substance in syphilis is. The means of propagation are not yet understood.

There is a tendency, fostered by medical men of high culture, to find out the entity producing disease. Beautiful discoveries have been made, and some have been led to deny the production of disease, except by some formed entity. There are diseases, as zymotic, etc., without the trace of a formed body. Septicæmia is caused, say some, by bodies found in putrid matter; but this has been denied, as the disease may be produced by a fluid which contains no body perceptible by any known means.

Dr. Comegys said that on a former occasion he had alluded to the researches of Chauveau, Burdon, Sanderson, and others, in regard to the mode of existence of contagium; that is to say, its physical and chemical properties. In vaccine lymph, which consists of serum, leucocytès, and granular matter, they found that the infecting principle exists in the granules only; not at all in the serum or leucocytes. These granules are not dissolved in the transparent lymph, nor are they soluble in water. They are $\frac{1}{200000}$ of an inch in diameter, albuminous, semi-transparent, and of a spheroidal figure. Beale found, some years before, that minute granules exist in vaccine lymph, which were the real infecting substance. Chauveau has extended his researches to the infecting fluids of variola, sheep-pox, farcy or glanders, and putrescent pus.

In all cases the infection depended on the presence of these granules. These produced like diseases in other animals. Inoculation is cell-planting. These particles are the micrococci of Haller, or the microzymes of English writers, which are said to be found in all infecting fluids.

The question now of greatest interest to pathologists is the mode of existence of this contagium. Is it a living cell capable of reproduction, and without relation to the body on which it preys? Or is it part of a living body, which is diseased, and capable of indefinite subdivision? These questions can not be answered positively, but an immense step has been taken toward uncovering the mystery by this isolation of the infecting particles. Mention should also be made of the discovery, by Bergmann of Dorpat, of a crys-

talline body, which he found in noxious fluids, that, when injected into a healthy animal, produced septicæmia.

REPORT OF CASES.

Dr. Taylor said that, one week ago, he was called to see a young man of spare, lax habit, aged 17; apparently healthy. He had fallen, striking on the side of the face, injuring the mucous membrane of cheek; wound contused, one-fourth inch in diameter. Soon after the injury, while attempting to blow his nose, he heard hissing noise. The cheek immediately became greatly swollen; was painless; no discoloration; no tenderness; no constitutional disturbance; no crepitation. Speaker thinks it a case of emphysema—air being forced into the connective tissue by the expiratory effort.

Dr. Dandridge had seen an analogous case while in Vienna. Owing to an injury during an attempt to catheterize the ear, air was forced into the connective tissue, producing an effect similar to that described by *Dr. Taylor*.

Dr. Dandridge said he had recently been asked by *Dr. Kemper* to visit a child which had been vaccinated ten days before; child had been doing well. There were four marks on the arm, an ulcer at each point, covered by unhealthy pus. The arm looked erysipelatous. The next day the inflammation had extended. In thirty-six hours, the child broke out with scarlet fever. What he desired to ask the society was, "What effect the scarlet fever would have on the vaccine disease?" In the beginning, it promised to be a normal case of vaccinia; twelve days after, scarlet fever supervened. Had the latter vitiated the result of the former?

Dr. Davis related a case, showing how one poison may be held in abeyance by another more powerful. While his oldest child was spending some time at his grandmother's, a member of the family broke out with varioloid. The child returned home, and in three or four days became feverish. Scarlet fever developed. As he was convalescing from this, pustules indicative of variolous poisoning appeared. Varioloid in mild form ran its course, after the scarlet fever had run its course.

Dr. Davis said he had intended reporting some cases called to his mind by the paper of *Dr. Quinn* at the preceding meeting. A few weeks ago, he was called to see a boy who had sore throat and enlargement of the cervical glands—no eruption. He treated it as a case of diphtheria, and in a few days the patient was discharged.

Some days later, he was called again to the same family; found a child with well-marked scarlet fever. Thirty-six hours later, a child, six months old, was taken with convulsions, and died before evening. He directed the free use of carbolic acid in the room as a disinfectant. Two other children had the disease (scarlet fever) in a modified form. The mother presented some symptoms of the disease; also a friend who came in to assist. He now thinks the first child had scarlet fever, without eruption; the second and third cases were violent; the subsequent cases more mild, which, the doctor thought, was due to the use of the carbolic acid. A family overhead was not affected, although members of it had never had scarlet fever.

The statistics of the late epidemic show that the mortality was not greater in tenement-houses than in the houses of the better classes. In the former, carbolic acid was used. If it had been as freely used in private dwellings, he thought it would have cut short the spread of the disease.

The Cincinnati Medical Society met January 19, 1875, in regular session—the president, Dr. Kemper, in the chair.

Dr. Dandridge presented a cerebral tumor, removed from a boy $4\frac{1}{2}$ years of age. Tumor was in the angle between cerebrum and cerebellum, pressing upon the roof of the latter.

In answer to *Dr. Comegys*, *Dr. Dandridge* said the tumor pressed upon the posterior part of frons from behind; also caused pressure on fourth ventricle. Pressure was more on the right side.

Dr. Comegys remarked that while the irritation of a tumor may produce a condition of reflex paralysis, yet it is evident in this case, from the differentiation of the right third nerve, that the tumor acted on the "fibers of origin" of the third nerve as they exist in the territory of the fourth ventricle, as the "fibers of exit" are from the crura cerebri, and do not appear to have been involved. But the relation of this tumor to the cerebellum is interesting, owing to the researches of Ferrier, who shows that this organ largely controls the movements of the eyes.

Dr. Mackenzie presented a gall-bladder and duct, removed from the body of a patient, the immediate cause of whose death was pneumonia. The biliary trouble had nothing to do with patient's death.

The gall-bladder was filled with gall-stones, and one gall-stone was lodged in the ductus communis choledochus, near its opening

into the duodenum. There were no ante-mortem symptoms of this trouble.

In contrast with this case, Dr. M. mentioned two cases in which he had recently made post-mortem examinations. Both patients were jaundiced. In one, there was no obstruction in the gall duct; in the other, a slight impediment in ductus communis. The liver was diseased in both cases. In one case it was fatty, and weighed 11 lbs. In the other, the liver was scirrhotic, gall-bladders not distended, and livers did not contain much bile. These cases occurred in the practice of Dr. Carson.

Dr. Mackenzie also presented a brain, removed from a patient who had died in the surgical ward of hospital. He was admitted December 18th, with a cut on the left side of the head just above the ear. The wound was inflicted by a railroad car, and was regarded as of slight importance until the 29th December, when he complained of pain in the head. The next day he had delirium; the next he was comatose, and remained in that condition twenty-four hours, when he died.

Post-mortem examination: On the left side of the head, just above the ear, was a slight wound, through which a probe could be passed to a distance of two inches toward the zygoma, which was found to be injured. The dura mater separated readily from the calvarium. There was some oozing of serum through openings in the dura mater, made by the saw. Some pus was found between dura mater and arachnoid. In the middle fossa the dura mater was easily separated from the bone. The brain is slightly depressed by the pus under the dura mater. No fracture of the bone except the injury to zygoma. On tracing the opening, he found the muscles infiltrated with pus. This extended to sphenomaxillary fossa. Some oozing of pus from foramen rotundum was observed. Dr. M. thought the inflammation commenced in the sheaths of the nerves, and extended by continuity of structure to dura mater.

Dr. Taylor said the man from whom this brain was removed, had presented himself at the clinic of the Miami College about four days after receipt of the injury, which was caused by falling in front of a car, the wheel of which struck him on the head. He was stunned for a short time. He gave a straight account of himself, and was altogether rational, though the pulse was slow and intermittent. Dr. T. had advised him to go to the hospital, because he thought no injury of the head ought to be regarded as a trifling

affair, but should be carefully watched. Some years ago he saw a man who had been struck with a slung-shot. He went about for a week, when one night his room-mate was awakened by a strange noise made by the man. He died soon after—probably from abscess of brain.

Dr. Carson, referring to the cases first reported by *Dr. Mackenzie*, said it was a matter of interest and importance how long the obstruction of the gall-duct had existed. It may have been of short duration, and jaundice might have followed if the patient had not died of the lung trouble.

In one of the cases which *Dr. Carson* had treated, jaundice had existed for some months; the liver was scirrhotic; the patient had been drinking; denied having had syphilis. In the other case jaundice had existed for only a few days; the patient had been vomiting for some days before jaundice appeared. He thought the jaundice not due to obstruction at the usual place of obstruction, but to catarrhal obstruction, which might have been revealed by further research. The catarrhal condition may have been removed, while the jaundice, being more slowly removed, continued.

This patient had all the evidences of poisoning by the biliary acids. He had free epistaxis, in which way he had lost a large amount of blood. He thought an examination of the heart would have revealed some fatty degeneration, but such examination was not permitted. The patient was found dead in the morning, and may possibly have died of syncope.

Dr. Comegys asked *Dr. Carson*, if jaundice might not exist without obstruction of biliary ducts, giving us a jaundice of suppression. He thought the biliary acids appeared in the urine in jaundice of obstruction. It is a function of liver to form biliary acids, and when in jaundice they appeared, it was an indication of jaundice of obstruction. On the other hand, in the jaundice of suppression the biliary acids do not appear in the urine, but leucin and tyrosine instead, which thus seem to be part of the raw material out of which the biliary acids are constructed. In conditions, therefore, of jaundice, when the autopsy shows the liver structure to be diseased without obstruction of the ducts, we have a right to assume a jaundice of obstruction.

Dr. Quinn said, in answer to a question by *Dr. Murphy*, that the deaths for the week, ending Saturday, 16th inst., were forty-seven more than the week preceding, and forty-eight more than for the corresponding week of last year, although the deaths from zymotic

diseases, violence, and accidents were less. The increase seemed to be in chronic cases. Seventeen deaths were reported from consumption, fourteen from old age.

TUESDAY, January 26, 1875.

Society met, president in the chair. Secretary being absent, Dr. Dandridge acted as secretary. Minutes read and received.

Dr. Carson read the report of a case of pneumonia with pleuritic effusion. Both were recognized during life. Post-mortem examination revealed only 10 ounces of purulent fluid, situated in the lower and anterior part of the pleural cavity, instead, as is usually the case, posteriorly. The case showed that had aspiration been attempted, and in the usual place, the lung itself would have been punctured. [Dr. C. promises a full report.]

Dr. Carson then presented a specimen taken from a patient dying from obstruction of the bowels. The following history was given: The patient had eaten corn for dinner Saturday, and two to three hours afterward was seized with severe abdominal pain. This was allayed by a dose of paregoric, ginger, and brandy; vomiting soon occurred and gave further relief. Opiates were given, and on Sunday P. M. was entirely free from pain. An injection brought away some fecal matter. From this time neither injections nor magnesia sulph. by mouth produced any action of bowels. Dr. C. saw him Tuesday; he was free from pain. In the right iliac region was an ill-defined dullness; above, the bowels were tympanitic; fecal vomiting had occurred twice and the expression was bad. Opiates and fomentations were ordered, and all attempts at moving the bowels discontinued. Twenty-four hours afterward a large water injection was given, without effect. Dr. Dawson was summoned to operate, but refused. A rectal examination, however, was made under chloroform, without results. Died Friday night.

Post-mortem showed the large intestine very small. The obstruction was five feet from the ileo-cæcal valve, and was caused by the loop of intestine being turned upon itself, and adherent from recent inflammation. Above this point the bowel was distended. The absence of previous bowel trouble makes it difficult to explain the suddenly developed obstruction. The doctor has now in hospital a case of obstruction occurring after typhoid fever. There has been fecal vomiting. Opium has been given, and beef-tea, etc., by the rectum. The patient is recovering.

Dr. Kearney. In first case, what was found on the post-mortem where the dullness was?

Dr. Carson. Two ounces of soft feces.

Dr. John Davis. There is a tendency to peritonitis now. Has lately had two cases.

Dr. William Davis related two cases which seemed to show that subacute peritonitis might exist without marked symptoms, and finally give rise to sudden trouble.

Dr. Dandridge related an attempt made in the dead-house to find out how far up the bowel the hand could be carried in rectal examination. In no case could the sigmoid flexure be passed.

Dr. Carson thought *Dr. D.* was right. He had examined three living cases, and had thought he had passed into the colon. He is now convinced he did not. This would also apply to introduction of the rectal tube.

Dr. Holdt thought that these cases of obstruction were due to a twisting of the bowel on itself. This was most likely to occur where the mesentery was longest. The two opposing surfaces developed the antecedents of inflammatory action, causing paralysis of the muscular coat, and this itself was sufficient cause for obstruction. Later, adhesions formed. This lesion was found most frequent in Russia, and was explained by the fact that there were 175 fast-days in the year, and both before and after these the people were given to great gluttony—eating rye bread, cabbage, etc., and drinking a beverage made from barley and containing acetic acid. In one of these cases the small intestine was fifty-four feet long.

Society adjourned.

CLARKE COUNTY MEDICAL SOCIETY — FEBRUARY MEETING.

The Clarke County Medical Society met at their rooms, in Springfield, on Thursday afternoon, February 11th. *Dr. W. G. Bryant*, president, in the chair.

Members present—*Drs. Bryant, Carroll, Dougherty, Hazzard, Kay, Reddish, Rodgers, Seys, and Totten.*

Dr. Carroll reported several cases of fever occurring recently in his practice. These cases were discussed by *Drs. Rodgers, Bryant,*

Hazzard, and Totten. They contained a combination of typhoid and malarial features, and were cases of unusual interest; and a consideration of the above-mentioned peculiarity led to many interesting remarks relative to the proper nomenclature which should be applied to such complicated cases. The subtle influences of malaria in the production of fevers remains a subject of unflagging interest to physicians and people.

The president then announced that the unfinished discussion of the last meeting upon the subject of medical ethics would now be taken up.

Dr. Kay remarked that he would resume the discussion, which was to be continued from the last meeting, by noticing some of the objections which were at that time urged against the national code of medical ethics. The only exceptions which were taken to this code, with its fifty sections, were found in sections three and four of article first, defining the duties of physicians in maintaining professional character, and section one of article four, relating to the duties of physicians in medical consultations. The gist of these objections might be summed up as follows: 1. The code does not allow a regular physician to "resort to public advertisements, or handbills, or newspaper notices of surgical operations, or other similar acts;" but denounces these practices as empirical and highly reprehensible in a regular physician. 2. This code disallows, as equally derogatory to professional character, the act of holding a patent for any surgical instrument or medicine, or to dispense a secret nostrum; and 3. The code states, furthermore, that "no one can be considered as a regular practitioner, or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry." These three features of the code, and only these, had been objected to by gentlemen in their elaborate and able speeches of the last session, and because of these alleged defects, some of our brethren had assumed the negative position in respect to the resolution before us. It was urged that the progress of the age demanded an amended system of medical ethics, one that accorded more fully with the advanced light and knowledge now possessed by the profession. In commencing his reply to the arguments of objectors, he would remark, in a general way, that progress or change of any kind was not a thing to be so much expected in ethical as in physical science. Ethics meant nothing

more nor less than the rules or science of duty, and was therefore a department of morals, not to say religion. What he had heard here in this discussion reminded him of the absurd cry of certain self-styled moral and social reformers, who claimed that the advanced civilization of the nineteenth century had outgrown the Bible, and that it called for a fuller and better declaration of faith and doctrine than that which the old, time-honored, and God-given book afforded. The truth was, that the systems of ethics, morals, and religion which were given to the world many ages ago, like the architecture, sculpture, and paintings of the ancients, had never been improved upon to any considerable extent, in modern times. All the present clamor for progress and change in rules of ethics, in order to suit the progress and improvements which have been made in medicine or any physical science, was, for similar reasons, empty and futile. Whatsoever is sound and suitable ethics now, will be equally so after all the physical sciences will have advanced tenfold beyond what they are now. But he wished to notice more particularly the three prominent objections mentioned at the outset.

First. The code does not allow a regular physician to resort to advertisements or handbills, etc. It had been urged that this prohibition cramped the energies and talents of the younger members of the profession. It compelled them, as it were, to put their light under a bushel. It did not allow the accomplished and ambitious young physician and surgeon to set himself upon a hill, so that, like a city thus situated, he might be seen afar off. In reply to this, he would simply say what was patent to all, that a worthy, well-educated, and skillful physician, young or old, would surely, if not rapidly, become appreciated by the public; that his practice would grow as steadily, and his income increase as constantly from year to year, as his merits warranted. At all events, his success would be more certain than if he resorted to the newspaper advertisements which some use and others seem to sigh for. Unappreciated and unrequited professional merit is not so common a thing as some of our opponents would have us believe.

Second. It was named as an objection to the code that it declares it "equally derogatory to professional character for a physician to hold a patent for any surgical instrument or medicine." Medicine claimed to be a noble profession. This claim could partly be based upon the fact that all its ingenious contrivances, by way of surgical instruments and medical combinations, had been freely thrown open to the whole world. The prices of these com-

modities had never been enhanced one penny, by way of taxation for patent rights. Nothing pertaining to their structure or combination had been kept a secret, nor had their use been restricted to those who had previously purchased a patent right to use them. The code does not propose to give up, nor should we be willing to give up, these acts of gratuity to the world, upon which medicine can justly base its claim to the character of a noble profession, and that, too, merely to advance the pecuniary interests of a few avaricious patent-right dealers. When we use the term "noble" as applied to the medical profession, we attach to it a meaning as descriptive of moral character, and in proving our claim to nobility, we can not afford to dispense with the old custom which has prevailed for the last three hundred years, of throwing gratis upon the world the valuable discoveries of the science. Where one brilliant and ambitious youth in the profession has been cramped by this provision in the code, one thousand of our fellow-beings have been benefited by it. The code provides for the greatest good to the greatest number. As to *patent medicine*, we would repeat what has always been asserted by regular physicians, that these nostrums are, in the main, injurious to the people, and that the scientific principles upon which these medicines are gotten up, and the ethical principles upon which they are patented and sold, are decidedly erroneous and bad. Some of the prominent officers connected with the U. S. Patent Office are beginning to take the same view of this subject. The present principal examiner of the U. S. Patent Office has recently given it as his opinion: 1. That each one of a number of ingredients being used alone to attain the result which it is said a mixture of all will, or even separate ingredients being put into a mixture to perform separate functions or meet separate indications within the human body, a mere assemblage of such ingredients—there being no chemical action—the compound should not be a thing patentable. 2. That a proper distinction should be made between *invention* and *discovery*. Under the former, a new thing is created; under the latter, something previously existing is found. A patentable compound should produce novel and unexpected effects in a line not analogous to anything to which the thing has been applied before. 3. To write a prescription is not invention within the meaning of the law, nor yet a patentable discovery, but rather a matter of skill. 4. That the granting of patents upon the various prescriptions or compounds, is pernicious: First, because the same nostrum can not be taken with

benefit by all persons, even for the same disease, difference in diathesis and other conditions requiring different remedies. Such patents thus generally inure to the benefit of one (the patentee), and the injury of many. And second, a certain mixture of well-known drugs being indicated, the already existing knowledge of the physician of such fact should not be trammelled by the fact that some enterprising individual had already taken to himself (by patent) a monopoly of just this mixture, in contravention of public policy and the welfare of man. Thus we see that certain branches of our government are beginning to assume the same ground in relation to patent medicines as that held by the regular medical profession. Dr. Kay then discussed the last-named objection to the code—viz., that no privilege was given physicians to consult with empirics. This principle of our code was based partly upon the good and sufficient reason that the theory and practice of medicine, as held by scientific medicine on the one hand, and empirical medicine on the other, were so radically different that no consultation between representatives of these opposite schools could possibly result in any good to the patient, nor in benefit to the practitioners themselves. Either the one or the other must surrender his principles almost entirely before a plan of treatment could be adopted. The code does not ask us to act otherwise than gentlemanly with any one. It would approve of a regular physician in acting for the immediate relief of a suffering fellow-being, whether in the presence of an irregular or not, but it does not encourage deliberately planned consultations with those who habitually denounce the regular physician as an unmitigated evil, and that continually. Professional pride and self-respect, if nothing else, should forbid.

Dr. Hazzard thought that in criticising the national code, we were not under the necessity of approaching it with that fear and reverence which is required in criticising sacred writ. No mere production of man was above criticism, nor was it entitled to anything like superstitious regard. He thought that Dr. Kay was erring too much in that direction. The medical code, as it now stood, was, taking it altogether, too illiberal and exclusive. This illiberal spirit, so repugnant to the spirit of the present age, subjected the medical profession to the unfriendly criticism of the world, and thus unnecessarily generated a prejudice against us. We should ever bear in mind that the spirit of liberality was abroad in the world, and that the day for narrow and ill-supported dogmas had passed. There had been a disposition toward exclusiveness in the

medical profession for ages, and it was unworthy of any scientific body. Medicine had never been entirely independent of the outside world for its information. Some of its most useful knowledge had come from the most diverse directions, from the most insignificant sources, and from what some of our disputants here would stigmatize as disreputable sources. This, however, did not depreciate the value of such knowledge in the least. The truly magnanimous and philosophical mind would not disdain to receive light and knowledge from prince or peasant, from the learned or unlearned. So we should be equally catholic in our recognition of every source of goodness and truth. It would assist us very materially toward the attainment of this catholicity of spirit to bear constantly in mind the fact that medicine was not one of the exact sciences. Many theories and principles of practice, once accepted as orthodox by the medical profession, had long since been exploded and were now rejected. And more than that, many of the principles and facts now accepted and acted upon by us every day, had originated from empirical sources. Electricism had given us some valuable improvements in the treatment of certain diseases; improvements in therapeutics also, as well as in practice. Homeopathy also had called the attention of medical practitioners to the feasibility of diminishing the doses of medicine in the cure of disease. In view of these instrumentalities of usefulness on the part of other schools of medicine, so-called, we should enlarge our mantle of charity, to say the least. The code, as it now stands, crystallized and encouraged this spirit of illiberality and uncharitableness. The people and humanity demanded a revision of our rules in this respect. In regard to availing one's self of the benefit of patents, he could see no reason why regular physicians should be debarred the privilege of making all the money in this direction that other men enjoyed. A doctor was under no more obligation to confer gratuitous service upon the world than others, but, on the contrary, he was under the same moral obligation to attend faithfully to the pecuniary interests of himself and family. If he invests anything that proves successful in the cure of maladies or the adjustment of surgical accidents, he should be well paid for it; at least better paid for it than the code would allow him to be.

Dr. Carroll had noticed that the gentlemen on the opposite side were laboring under a serious misapprehension in regard to the conduct which the code requires of physicians toward men of other medical schools. It advised physicians to act the gentleman toward

every one. He believed in a man being honest in his professions, and could not see how men belonging to certain of the empirical schools could possibly believe what they profess. If these empirics believe what they say, we can not possibly consult with them, and if they do not believe in their own absurdities, then a consultation would be equally impracticable. The only matter to decide in this connection is, whether any good would accrue from the recognition of irregulars in medical consultations. Dr. C. then commented upon the position taken by certain high homeopathic authorities upon the subject of infinitesimal dilutions, showing the impossibility of agreement as existing between homeopathic practitioners and regular physicians.

Dr. Bryant said that he had been acquainted with all the members of the regular profession in this county, and that with the exception of some perhaps who are not now members of this society, having forfeited that membership, all are in the habit of obeying the code. He had himself tried to adhere to that code. He thought it best to make this statement for fear that the public might think that the occasion of this extensive discussion was a habitual violation of the provisions of our code. This, as he knew, would be a misapprehension. He knew of no complaints of the kind existing in our midst.

All further action upon the resolution being indefinitely postponed, the society then adjourned, to meet again on the second Tuesday in February.

Solution of Morphia for Hypodermic Injection.—Dissolve ten grains of hydrochlorate of morphia in two drachms of distilled water by the aid of heat, without any acid, spirit, or glycerin. Two minims of this solution, *i. e.* one-sixth of a grain, should be the commencing dose. It becomes solid at ordinary temperatures, and when wanted for use must be heated. The advantage is, that however long it is kept, the solution never spoils.—*Dr. H. Lawson.*

Dr. Keith, of Edinburgh, is said to have performed ovariectomy now one hundred and ninety-six times, with the low mortality of late years of only ten per cent.

Selections.

On the Treatment of the Diarrhea of Typhoid Fever.—The diarrhea of typhoid fever, as it is one of the most frequent symptoms of the disease, so is it one of the most troublesome, and one which often causes the greatest anxiety. It is a fact generally admitted that in the great majority of cases the severity and danger of typhoid fever are in direct proportion to the intensity and duration of the diarrhea. Delirium and other serious cerebral symptoms, pulmonary engorgement, and renal congestion with albuminuria, are comparatively infrequent complications. The treatment of diarrhea, then, forms a very important part of the management of the disease. During the many years of my connection with this hospital I have had the opportunity of seeing the diarrhea of typhoid fever treated in very different ways and with very different results, and I propose now to give you, in a few sentences, the results of my experience with reference to this important practical subject.

For a number of years the practice strongly advocated by Dr. Todd was generally adopted throughout the hospital. This consisted in persevering attempts to arrest the diarrhea by repeated doses of opiates and other powerful astringents. It was then a common practice to give an enema containing from ten to fifteen or twenty drops of laudanum after each liquid stool. The result of this treatment, in a large proportion of cases, was that the diarrhea continued in spite of the repressive treatment, and meanwhile the intestines were distended with gas, and the abdomen became tumid and tympanitic. Then the patients were tortured by the application of turpentine stupes to remove the tympanitis. The results were altogether most unsatisfactory. Nor is it difficult to explain the failure of this opiate treatment. Without entering upon the consideration of disputed pathological theories, it can scarcely be doubted that one effect of opium must be to render the intestines torpid and to lessen their expulsive efforts, and as a result of this their putrid contents are retained until they decompose and give off noxious gases by which the bowel is distended and irritated, and so the diarrhea is perpetuated and increased. It is

pretty certain that the healing of the ulcers must be impeded by the continual contact of the fetid morbid secretions, and that the distension of the bowel must cause pain and increase the risk of fatal perforation or rupture.

Now for a number of years we have entirely changed our treatment, and I have gradually arrived at the conclusion that in the treatment of typhoid fever careful nursing and feeding are of primary importance, while, as a rule, no medicines of any kind are required, and when not required they are often worse than useless. The result of this change of treatment has been that diarrhea is a less frequent symptom than formerly, and when it does occur it is far more tractable, while tympanitic distension of the abdomen is a rare event. The mischievous opiate enemata and the torturing turpentine stupes have disappeared together. I believe that one of the main reasons why we have less diarrhea than formerly is, that we carefully abstain from the employment of irritating drugs of all kinds. As a rule, a fever patient has the "yellow mixture," which is simply colored water; and except an occasional dose of chloral to procure sleep, and a tonic during convalescence, we give no active medicines of any kind. We feed these patients mainly with milk, with the addition of beef-tea and two raw eggs in the twenty-four hours, and we give wine or brandy in quantities varying according to the urgency of the symptoms of exhaustion, especially in the advanced stages of the disease; but in many of the milder cases, and especially in the case of children, we find that no alcoholic stimulants are required from the beginning to the end of the fever, and when not required they are of course best withheld. I have said that we give no irritating drugs of any kind. For a time I adopted the practice which has been strongly recommended, of giving repeated doses of diluted mineral acids. I have long since abandoned this practice, for I am sure that it was injurious, and it was injurious in a very obvious and intelligible way: it irritated the ulcerated mucous membrane of the intestines, it caused pain and griping, and I believe that it often increased the diarrhea. I have no doubt that the comparative infrequency of severe and obstinate diarrhea amongst my enteric fever patients during the last few years is partly attributable to the discontinuance of this mineral acid treatment. The extreme sensitiveness of the intestinal mucous membrane during the progress of typhoid fever is obvious and indisputable. It is admitted on all hands that the greatest care is required in returning to solid food during

convalescence; a want of caution in this respect has often been followed by a return of pain and diarrhea, an increase of temperature, and not seldom by a decided relapse. If, then, a slice of bread or a morsel of fish can excite such local and general disturbance even after the subsidence of the fever, how improbable is it that repeated doses of an irritating mineral acid can be given without injury during the height of the fever, when the ulceration of the intestines is actively progressing!

One more hint I wish to give you with regard to the diarrhea of typhoid fever, which is, that in all probability it is often increased by the patient's inability to digest the beef-tea and eggs which are sometimes too abundantly given. When you have reason to suspect that this may be the case, I advise you for a few days to keep the patient entirely upon milk, which contains all the elements required for the nutrition of the tissues in a form most easy of digestion. I have had a large experience of the effects of an exclusively milk diet in various forms of disease. In many cases of Bright's disease it is very efficacious, but one of the inconveniences in some of these cases is its tendency to cause troublesome constipation. In many cases of chronic diarrhea and dysentery, milk diet will effect a cure without the aid of medicines of any kind. There is now in Twining ward a girl, aged fourteen, who for four months had been suffering from dysenteric diarrhea, the stools containing much blood and mucus. She was put upon a diet of milk alone, without medicine: within a fortnight the diarrhea entirely ceased, and she is now convalescent. For the reason, then, that milk has this antilaxative and even constipating effect in various morbid states, it is, when given alone, one of the best antidotes for the diarrhea of typhoid fever.

That our treatment of fever cases is not unsuccessful is shown by the results. I find on reference to my case-books, that during the past year, from November 1, 1873, to October 31, 1874, I have had under my care in the hospital twenty-nine cases of fever; fifteen typhoid, and fourteen typhus. Some of the cases have been very severe, but all have been discharged well; not one death has occurred. This very satisfactory result I attribute mainly to the admirable nursing which our patients receive, and to our abstinence from mischievous medication. To only one of these patients was opium given, and that was for the relief of an irritable condition of bowel which remained after a very severe attack of typhoid. A few doses of opium soon put a stop to this, and the patient made a good recovery.—GEORGE JOHNSON, M.D., F.R.S., *Senior Physician to King's College Hospital, in Practitioner.*

On the Alleged Successful Treatment of Typhoid Fever by "Cold."—Among the remedial measures which are attracting attention at the present time, some of the most important are those which have come into prominence in connection with the treatment of febrile diseases, and which have for their object the application of cold to the external surface of the body. Of course they do not involve any newly discovered principle, for they are merely revived methods of a plan of treatment which is more particularly associated with the name of Currie, who laid down definite rules as to how and when it should be carried out. These measures have been, during recent years, much more extensively and generally employed on the continent, and especially in Germany, than in this country; but any one who is acquainted with current medical literature must be familiar with the fact that they have not been ignored by the profession here, but have been duly recognized as affording valuable aid in the management of fevers, under certain circumstances, and that their efficacy has been tested by several accomplished observers, such as Wilson Fox, H. Weber, Ringer, Thompson, Greenhow, Clifford Allbutt, and others.

The object of the present paper is to offer a few remarks with reference to the alleged advantages of the use of "cold" in typhoid fever. But before considering the matter in connection with this particular complaint, I wish to make some observations of a general character. First, most of the methods by which the application of cold is effected require much care and attention in carrying them out: they must be conducted under the personal supervision of a competent medical attendant, and their effects need to be thoroughly watched. They have been lately alluded to as "simple remedial measures," but this they are not in any sense, for most of them involve no small difficulty in their execution, especially in private practice; while as regards their effects on the system, they by no means come under the category of simple, harmless measures, such as may be adopted in a routine, off-hand fashion. Secondly, the more evident effects which have been noted from the employment of these applications in febrile cases are, the reduction of the temperature of the body; diminution in the frequency of the pulse; the checking of tissue change, as evidenced by the excretions and by wasting being less rapid; the relief of nervous symptoms; and the modification of the eruption in certain of the exanthemata. The eruption may be encouraged to come out, as in scarlatina or measles; or, it is stated, it may

be diminished in amount and improved in quality, as in small-pox. It is in the treatment of cases attended with very high temperature—cases of hyperpyrexia—that the beneficial results of applying cold to the surface, by means of baths, etc., have been most signally obtained; and here it may be said without any exaggeration to have saved the lives of patients who must inevitably have died had not this method of treatment been adopted.

Several German physicians have spoken highly of the treatment of ordinary cases of various fevers, and among them of typhoid fever, to which disease I desire now to call attention more particularly. In a paper on typhoid fever in the recent volume of the St. Bartholomew's Hospital Reports, Dr. Gee considers the use of external cold in its treatment, but apparently rather from a hypothetical point of view than from any actual experience of its advantages. He implies that, if employed at an early period, during the primary fever, it might control the local intestinal lesion, by limiting the number of follicles involved; while in a more advanced stage it might be useful in reducing the secondary fever which accompanies the morbid changes in their progress.

The conclusions of these observers who have practically tested this method of treatment deserve our thoughtful attention, and it is important to ascertain what they affirm respecting it. None of those who are reliable pretend that they can actually *cure* typhoid fever, either in the sense of checking the disease at the outset, or even of shortening its course. To talk of *curing* or *arresting* this complaint shows a want of knowledge as to its nature. At the best, we can only guide it in its progress, and endeavor to bring the patient successfully through the dangers which he has to encounter. This remark applies not only to the treatment now under consideration, but to any other which claims an influence of this kind over typhoid. Some believe that the convalescence is more rapid after the treatment by cold; but others deny this. So also is there a difference of opinion as to whether it affects the more prominent symptoms, such as diarrhea, tympanitis, intestinal hemorrhage, etc.; some asserting that these are beneficially influenced, others that they are not. All seem to agree that it does not increase the tendency to lung-inflammations, or aggravate these if they already exist. The most important statement made is, that this method of treatment has greatly reduced the mortality from typhoid fever, particularly when the cases have been treated from an early period. Certainly the returns made show a great difference in this respect,

when the past is compared with the present, and seem to indicate a highly satisfactory result. At the same time, before any certain conclusion can be arrived at, a large number of cases ought to be taken into consideration; for it often happens that a series come under treatment which are of a mild type, and the mortality may present a very low percentage, whatever treatment may have been adopted; while some epidemics are very fatal. Judging from personal experience, and combining hospital with private practice, I believe that the rate of mortality has not been higher in the cases that have come under my own notice than it is represented in the German returns. The mortality in former times was decidedly high, and it would be well to know what modes of treatment were then adopted, as they were not always of a harmless character in days gone by, while the diet and hygienic conditions—most important elements in the treatment of typhoid—were not attended to then as now.

Those who adopt this plan of treatment are anything but agreed as to the details of carrying it out. The principal methods employed are frequent cold or tepid sponging of the skin, wet-packing, cold baths, affusion, and tepid baths gradually cooled. Some pursue the treatment vigorously in all cases; others only when the temperature reaches a certain height. There are also differences as regards the duration of each application, the frequency of their repetition, and the length of time during which they are continued.

I venture to state briefly the conclusions which I have arrived at with respect to the treatment now under consideration.

1. It is highly desirable that the members of our profession should be more generally impressed than they are at present, with the usefulness of the various modes of applying cold to the surface of the body in febrile cases, under certain circumstances; and that they should be prepared without hesitation to carry one or other of them out efficiently whenever this plan of treatment is indicated. This applies to typhoid in common with other fevers.

2. On the other hand, to adopt a routine hydropathic treatment of any fever seems to me most objectionable, and this applies especially to the more severe methods which are advocated. As already remarked, they are not easily carried out in general practice; they are certainly not required in a large proportion of cases; most of them are anything but pleasant to the patients, and they may prove very trying and exhausting, especially if frequently

repeated, as they usually need to be, if the treatment be efficiently fulfilled; while it must be remembered that they are not harmless measures, but may have a powerful influence for evil as well as for good. With regard to typhoid, many cases do not come under observation until it is too late to attempt to check the primary fever, even supposing that the intestinal lesion could be thus limited. For these and other reasons I do not see that, at present at least, a hydropathic treatment of typhoid fever in general practice has any claim to our support. If it is thought worthy of trial, it ought first to be fairly tested in *bonâ-fide* cases of this disease, and under the strictest and most competent supervision. With regard to sponging the skin, I believe that this is often very useful, and ought to be employed far more frequently than it is at present, in typhoid as well as in other fevers. With proper care it does no harm, while it often gives much relief, and is beneficial in other respects.

3. The cases in which the more severe methods of applying cold are indicated are those in which the temperature is already very high and remains so, or shows a tendency to rise rapidly, especially if, at the same time, there are signs of much nervous disturbance. Unquestionably this plan of treatment is not resorted to under these circumstances nearly so frequently as it ought to be. It is difficult to lay down any exact rule as to what temperature indicates the necessity for adopting it, but if it reaches to 106° F. and shows no tendency to fall, or, still more, if it continues to rise, this treatment deserves due consideration. Necessarily much will depend on the actual condition of the patient, and every case must be thoroughly considered in all its features. The best method seems to me decidedly that of placing the patient in a tepid bath, and gradually cooling this. Affusion over the head is useful if there are marked nervous symptoms. Of course it is imperative that this treatment should be always conducted under the strictest supervision, and its effects carefully watched.—FREDERICK T. ROBERTS, M.D., B.S.C, M.R.C.P., *Assistant Physician and Teacher of Clinical Medicine at University College Hospital, etc., in Practitioner.*

A Bedside Lecture on Rupture of the Perineum, with Description of a New Operation for its Relief. Delivered in the Charity Hospital, New Orleans, by D. WARREN BRICKELL, M.D., Professor of Obstetrics, etc., in Charity Hospital Medical College.

GENTLEMEN: A very common occurrence to the parturient woman,

in the hands of the midwife or the careless practitioner, is rupture of the perineum to a greater or less extent. Of course, if there be a very large child to pass through a vulva of ordinary capacity, or if a standard child is to pass through a preternaturally small vulva, rupture may ensue in the most careful hand; and we see here, at the bedside, three cases in which it has occurred. All these women belong to the working classes. Two of them are reputable married women, who have borne a number of children each; the third says she is "an old maid," but the physical appearances say differently. All of them have been, for several years, bothered with what they call "falling of the womb;" now they are all *hors du combat*. In two, the womb drops entirely outside the body when they stand and try to perform the ordinary duties of life; one of these, when lying on her back, by "bearing down," can throw the womb entirely out; the other, in the same position, can throw the organ two-thirds out. The third can push the womb about one-third its length out, and she has the distressing complication of well-marked cystocele. In all of them you perceive, as they lie on their backs, and fully exposed to close scrutiny, the gaping vulva and utter loss of all tone in the vaginal structures. Even with my fingers I can take hold of the posterior or the anterior vaginal walls, and draw them out in folds; and I can seize the lips of the womb with the forceps, and draw it out at pleasure, with but little suffering to the patient.

In each of these cases you have the privilege of seeing what we call eversion of the lips of the womb; you can see the mucous membrane of the vagina, of the lips of the womb, and of the cervical canal. Fortunately you see those membranes under most favorable circumstances. In two of the cases the lips are much hypertrophied, but in none is there any ulceration, or even granular inflammation; in only one of them is there cervical hypersecretion; and in this case you have the privilege of seeing the tenacious mucus taken from the cervix as it lies outside the vulva.

Now, these patients are all before us for operative procedure. You have seen me try to support their uteri with pessaries; I did this more to demonstrate the inutility of the instruments than for anything else. I desired you to see that there is a stage of displacement, resulting from the perineal laceration, where nothing short of a surgical operation will be of service.

What is the object of surgical operation? It is to close up the gaping vulva in fully two-thirds its extent, and, while doing so, to

restore the thick triangle that lies between the natural posterior margin of the vulva and the anus. Why do we want to restore this triangle? Because then we shall cause the posterior wall of the vagina to approach the anterior wall, and we will thus restore the support of the latter, without which ultimate prolapse of the same must occur, as you see in one of the cases before you. When we have closely approximated the restoration of this triangle, then we have imitated nature; when we merely close the lower portion of the gaping vulva, we have not imitated her at all.

You see these women brought to the last degree of suffering—a degree that makes life a burden to them, and which renders two of them unfit to labor for themselves or their children. The other tells us she has no husband, or children, or friends, and that death is preferable to such a life. Now, long ere this they have been sufferers. Questioning them closely, we find that they never have felt all right about the pelvis since they were ruptured. In fact, I have no hesitation in saying that the woman who has any considerable laceration of the perineum, and who gets up without primary operation, will, sooner or later, be a great sufferer from relaxed vaginal walls and a procident uterus. The support of the anterior wall of the vagina and all vaginal support of the uterus is lost; and, sooner or later, those subjects become utterly miserable. I see them all around me; large numbers are treated for uterine disease, the conditions which produce uterine disease being utterly ignored.

I have long ago determined in my own mind that all cases of lacerated perineum should be operated on primarily—that is, within a few hours after the occurrence of the accident; the sooner the better. The parts to be operated on have their sensibility much obtunded, and the patient will not suffer so much; you can then see the extent of injury; all surrounding parts and organs are *in situ*; the anatomical relations are not changed as in after months or years, and the patient who gets up from the lying-in bed with the parts restored, does not take even the first step toward the deplorable changes you here see before you. Thus far I have always operated primarily, when occasion offered, and I have always been glad of it; and the more extensive the laceration the higher the indications for primary operation.

But the main question with us now at the bedside of those patients is that of the kind of operation to be performed.

I will not shock you, then, when I tell you that I know of no

satisfactory surgical proceeding for the restoration of the lacerated perineum, and that I am going to commence before you a series of experiments with, so far as I know, a new operation.

During a number of years past I have operated very frequently for restoration of the perineum, and by several of the most generally approved methods. I have nearly always succeeded in closing the vulva to the highest point of denudation, and I have, I am sure, rendered very great service to the great majority of the patients. It has, moreover, been my lot to come in contact with cases operated on by others, and also to attend women in labor who had been previously operated on by others, but I assure you that every observation has been unsatisfactory. I never rose from an operation of the kind without feeling that my work, and the work of every other person in this line, was utterly unsurgical; and this I say with the greatest diffidence.

What is the difficulty in the way of the surgeon? It is easy to denude the parts extensively, but under no acknowledged procedure that I know of, can the whole denuded surfaces be brought *smoothly and completely in apposition*. With wire, or any other ligature alone, no reasonable approach to such a result can be accomplished. The quill suture effects rather more; but even it falls far short. A considerable portion of the surfaces to be approximated lie too far in to be grasped in the embrace of the quills, and twice or thrice the diameter of the quills does not represent the depth of surface of a freely lacerated perineum.

What is the trouble? A few words will express it. It is that when you tighten your sutures for the purpose of bringing the denuded surfaces together *laterally*, the same force, in proportionate degree, draws the posterior margin of your denuded surface toward the anterior, and you are then sewing together two *corrugated* surfaces. The consequence is, first, that the antero-posterior tension will not unfrequently cause the wires to cut in posteriorly, that much of the denuded surface is released and separated, and only a thin wall unites; or, if cutting does not occur, and the whole of the corrugated surfaces do unite, instead of a thick, deep, slanting wall presenting itself to the finger, when passed in, we have an abrupt wall—it may be as thick as the finger—and closing the vulva, but not representing a restored perineum in quality.

Can this difficulty be overcome? I think so; and we are now going to commence a series of experiments with that view. I have long been thinking over this matter, and within the past two years

I have been at work to solve the problem. My first idea was that canulated needles, plunged deeply through the tissues on each side, containing the wires, and allowed to remain for the same length of time that we usually allow the ordinary wires to remain, would certainly prevent corrugation, and would maintain adaptation of surfaces. The theory is without flaw; but mechanical adaptation has been unsatisfactory. *First.* It is easy to pass the wire through the right-hand needle; but it is really difficult to bring it out the left. It is difficult to get a canulated needle with large and smooth bore; the needle is too large in its entirety. *Third.* The canulated needles, to hold the parts firmly and smoothly in apposition, must be of well-tempered steel that will not bend. I could not get such made.

I now present you a new plan. It is to establish what I will call fixed stays, at intervals of three, four, or five eighths of an inch, between the denuded surfaces that are to be united. My "stays," as you see, consist of a small, highly tempered steel wire, with a movable loop on the inner or vaginal end, and a fixed loop on the outer or vulvar end. These "stays" are of variable lengths, so as to be adapted to the varying depths of the denuded surface. I pass a silver suture deeply through the structures on my right, and I bring the same suture out as deeply through the structures on the left. Without the stay *in situ* I now make forward traction, and you see for yourselves that the posterior part of the denuded surfaces rapidly and surely approaches the anterior. Now, if I twist those wires together, you see plainly that the moment pressure is brought to bear on the external margin the approach of the posterior and anterior edges is more decided; in other words, by tightening the wires I do bring the surfaces together laterally; but these surfaces are surely corrugated by antero-posterior tension.

Again, what can we say to the advocates of the quill? I place the handles of my instruments on each side (or my fingers, if you will), to represent quills, and you clearly see that only so much of the denuded surfaces as are represented by the diameter of the quills, are brought smoothly in contact; all that is behind the quills is corrugated.

But we now relax our wires and apply our "stay." The end with the movable loop is pressed firmly against the suture, deep in the vagina, we holding the external end steadily. The wire being of soft silver, the loop is thus fixed. An assistant now holds the "stay," at the same time pressing gently backward, and I begin to

twist. Soon the twisting runs within the external loop, the assistant lets go, and I now tighten at my pleasure. What is the result? Why, my suture being fixed in the anterior and posterior loops of the "stay," all antero-posterior tension is spent in bringing the denuded surfaces together *laterally*; it is impossible to bring the anterior and posterior edges of the denuded surfaces toward each other, because in tightening the suture I do not bear upon them at all.

I now pass about three or four eighths of an inch above this suture, and plunge my needle in for a second "stay;" then I arrange for a third, and then a fourth. As I ascend, my "stays" grow shorter, to correspond with the diminishing depth of the denuded surface.

All the "stays" being applied, What is the condition of the parts? Of course each wire or "stay" prevents union, just to the extent of its diameter; but you perceive that the spaces between the "stays" are tied closely together. It is indeed the prettiest coaptation I ever saw. All that we require besides are light auxiliary sutures between the "stays" to bring the external edges together, and we apply them. They are not *necessary*, but the operation is neater with them.

At the end of eight or ten days, I propose to remove the "stays" and sutures. How is it to be done? I will cut the wires externally; this relieves the outer end of the "stay," which I will then draw gently out, letting the inner loop drop into the vagina, whence it can be subsequently removed. The wire can be drawn externally or internally. Of course, fistulæ will remain in the beds of the "stays," but these will soon heal by granulation.

NOTE.—Three women have been operated on by this method—one on the 22d of November, one on the 29th of November, and one on the 6th of December. From the first two the sutures were removed on the tenth day after the operation, and the results are the most satisfactory. At the date of forwarding this manuscript (December 10th), case third is progressing most favorably.—*American Supplement to Obstetrical Journal*.

Illustrations of Heredity; Influence of both Parents on the Children.—In calling the attention of the medical profession to a few remarkable cases of the pernicious influence of the use of alcoholic liquors by parents upon the minds and bodies of their offspring, it may not be out of place to indicate in the premises the factors through the

action of which such conditions may be transmitted. It would be superfluous to bring forward evidence to show the hereditary tendencies in the constitution of both the body and mind under normal laws and circumstances, these facts having long since been settled by physiologists. The questions, however, relating to the hereditary transmission of temporary or acquired parental peculiarities, are not as fully recognized as they should be.

The following appear to me to be the essential conditions under which parental characteristics may be expected to be transmitted :

1. The natural healthy constitutions of father, mother, and their ancestors, are blended in their offspring.

2. The offspring of healthy individuals are likely to inherit the cast of the more strongly constituted parent, or, the particular organs most highly developed, as they may appear in either of them.

3. In the acquired constitutional change, whether of disease or development, the impression may be so strongly made that the tendency to reproduce it again is stronger than to reassume the normal condition.

4. Strong mental impressions of either parent, though of comparatively short duration, may prove to be dominant in the offspring.

5. There may be a duality, in some instances, of mental impressions in the offspring on the same subject, having resulted from conflicting influences in the minds of the parents, as the following cases will serve to illustrate.

6. That parties whose ancestors have been drunkards, and who are constitutionally affected from that influence, show it in the lineaments of their bodies as well as in their mental peculiarities.

Through the consent of a grandchild of E. T., I have permission to report to the medical profession the following piece of family history, illustrating the baneful influence of alcoholic excesses, transmitted to the second, third, and fourth generations.

CASE I. E. T., the first link in the chain of descent we describe, was a wealthy lumberman, descended from a highly respectable family, in which we have no account of any pre-existing nervous or mental disorder. Notwithstanding the fact that the habit of drinking was much more general among the better classes in our country sixty or seventy years ago than it is at present, there is no evidence to prove that he was, to any extent at least, the victim of heredity. Genteel, affable, and kind in his manners,

he married at an early age, and commenced business with a fair prospect of success. Under the influence of associations, however, in the course of a few years he became confirmed in drinking habits, which in his case took on a periodic character, about two weeks being spent in a state of intoxication, alternating with about the same time in which he would drink but moderately. When intoxicated he appeared to possess a mania to abuse his family. If possible, it was a greater luxury to him than the use of the alcoholic liquors he drank. With his mind stimulated to such an unnatural strain, and he striving continuously to render his abuse, by every means he could devise, as intense as possible, he became an object of horror at these times, to his wife and all others with whom he chanced to meet. He was so violent at times that it became necessary for all with whom he lived to leave their home and seek other quarters.

This state of their domestic relations remained as described five or six years, when a son, unfortunately for many others, was brought into existence. This son, J., early in life manifested many very peculiar eccentricities. While but a lad, he would study to annoy his mother and other associates, devising every plan at his command to make trouble; but if it passed unnoticed, he would then exhibit his intention by violent abuse. But when he attained the age at which his father began to drink excessively, he then manifested every trait of character possessed by his father after he had become a drunkard, with one exception, namely, that he had his mother's aversion, which was exceedingly strong, to the use in any way whatever of alcoholic liquors. This son would not touch a drop of spirituous liquors, and would fairly detest any person who would, and yet he could not avoid his two weeks in every month of *mania* to abuse and annoy his family, which was carried to as great an extent, and in the same way as his father, but without ever having tasted a drop of alcohol. His family consisted of a wife and eight children, two of whom died while quite young; of the remaining six, but one possesses the father's habits, and that one has them in every particular. In this one the horrid and detestable traits of character crop out as in the grandfather a half century ago.

The fourth grandchild in this family history has a son four years old, in whom both the mental and physical characteristics of his great-grandfather, after he had become an inebriate, are brought out in every particular.

Of the six adult grandchildren the inebriate traits of character are impressed upon only one. There are now nine great-grandchildren, and only one well-marked case of this peculiar heredity.

CASE II. N. J., the subject of the following peculiar history, has attained the age of about forty; both he and his ancestors were healthy, industrious, and intelligent.

Although alcoholic beverages were used quite sparingly by his parents, the mother when *enciente* was in the habit of using them several times daily until after confinement. But just before becoming pregnant with the subject of these remarks, her eighth child, a strong temperance movement was instituted in the section of country in which his parents resided. His father being a minister, was naturally expected to take the lead in the good cause. Both parents taking an active part in the endeavor to suppress the use of alcoholic liquors, of course forbade the accustomed use of the beverage even in the delicate situation in which she had now become. During the latter months of gestation a great conflict ensued between the appetite for the beverage to which she had been accustomed, and the moral restraint to which she had subjected herself. The appetite growing stronger as gestation advanced, was a source of great discomfort; but the moral restraint and the power of the will held the entire mastery.

The effect upon the offspring was specific. The boy when quite small was often the object of observation. Quite to the surprise of his parents he manifested the same peculiarities of appetite and sentiment that possessed his mother during her stage of gestation with him. If there was any spirituous liquor anywhere near him he would be frantic to get a drink of it, but strange as it may seem, would appear glad when it was placed beyond his reach.

This gentleman reports, and his veracity is perfectly reliable, that from his earliest recollection he has always had a strong appetite and desire for alcoholic liquors, but is cognizant of the accompanying automatic action of the will, which enables him to abstain from them. He says that he has a conscious sensation within his own mind that the desire for these liquors is coupled, in the mind's action, with the will-power that enables him to abstain from their use. In short, he has a duality in the operations of his mind transmitted from his mother, and exactly as she had them.—RANSOM DEXTER, A.M., M.D., in *Chicago Journal*.

Loss of Smell and Loss of Taste.—After excluding from consideration cases where the defect of smell is owing to actual changes in the tissues of the nose itself, Dr. Hughlings Jackson remarked on pseudo-defects of smell. When the muscles supplied by the portio dura nerve of one side are paralyzed, the patient, on his power of smell being tested, may say that he smells less on the paralyzed side. The reason is that he can not “sniff up” so well on that side, and thus fewer of the volatile elements are brought in contact with the true olfactory region of the nose. Again, when the fifth nerve is paralyzed the patient does not, he may say, smell so well on the side affected. The fact is that he can not appreciate *irritants* on that side. He would appreciate the *flavor* of cinnamon or of oil of peppermint, but would not smell, or rather *feel*, ammonia. Of course, uneducated patients do not distinguish between such irritants and scents. In cases of true loss of smell, the patient, when very confidently smelling at a bottle of ammonia, finds, to his astonishment, that he “can smell *that*.” One of Dr. Hughlings Jackson’s patients who had lost smell, said the only thing he could smell was “the frying-pan;” here, no doubt, the real action was that of *irritant* vapors which were produced by changes in fats by heat. But it must be remarked that palsy of the fifth nerve may, by permitting changes in the mucous membrane of the nose, lead in an indirect way to deterioration of smell proper, as it may do to deterioration of the sense of sight by causing or permitting changes in the tissues of the eyeball. But, with the rarest exceptions, palsy of the fifth nerve occurs on but one side; whereas, so far as Dr. Jackson can determine, true loss of smell is nearly always double. It is scarcely possible to speak of *defects* of smell, as, unless the patient be very intelligent, our investigations end in no trustworthy results.

In speaking of smell proper, we must consider taste too. As just remarked, loss of smell very rarely occurs on one side, and now we have to add that loss of taste uncomplicated with other symptoms very rarely occurs on both sides. In fact, Dr. Hughlings Jackson has never discovered loss of taste even on but one side, except in cases of paralysis of the fifth nerve, and then the side of the tongue is insensible not to sapid things only, but to impressions of all kinds. Of course, when both fifth nerves are paralyzed, taste will be lost on both sides, but this double palsy is a thing of great rarity. In some cases of palsy of the portio dura, we seem, on inquiry, to make out that taste is defective on the paralyzed side, but

it is rare that we can be certain that it is. It is obvious that in uneducated patients we run great risk of error in such investigations, especially if we are so unscientifically minded as to ply them with leading questions.

It is well known that smell and taste go together in their action. There are many things which we seem to taste which in reality we smell. We are now and then consulted by patients for what they call loss of taste, and we find that the olfactory is the only sense wanting. The distinction of duties between smell and taste is generally believed to be that the former serves for the appreciation of those volatiles which undergo oxidation in the nose, and taste for crystalloids which can act on the tongue locally. Hence we smell sulphureted hydrogen, which is a gas easily oxidizable, and we do not smell carbureted hydrogen, which is a gas not acted on by oxygen. But there are exceptions; for example, carbonic acid, a fully oxidized body, has smell. Possibly such exceptions are apparent only—the action may be that of an irritant. Diluted carbonic acid has no smell. We taste crystalloids like sugar and quinine, but we only feel colloids like starch and gum. We do not taste but smell the bouquet of wines and the flavor of essential oils. If we put a little oil of peppermint on the tongue of a patient who has loss of smell, he may say he tastes it. So he does in a fashion; he can tell that it is hot, but he does not appreciate its *flavor*; and unless we get a patient to give us the *name* of the flavor we can not be sure that his smell really enters into his appreciation of the substance he has in his mouth. It must be admitted that the investigation of the condition of the senses of smell and taste is one of very great difficulty. It is next to impossible in unintelligent patients to arrive at trustworthy conclusions.

Loss of smell is a symptom which does not receive the degree of attention it deserves. We are rarely consulted for anosmia, since loss of smell is not so important a defect as loss of sight or of hearing is. But anosmia is just as *significant a symptom* as amaurosis is, and if the patient who is anosmic has also severe and continued pain in his head and urgent vomiting, the symptom thus qualified would point to local coarse disease—*e. g.*, tumor syphiloma, etc.—inside the head, quite as strongly as amaurosis (from optic neuritis) in the same association would do. Another thing to be considered is, that just as optic neuritis may exist when the patient supposes his sight to be quite good, so the presumption is that olfactory neuritis may exist when the power of smell is not obvi-

ously diminished. Again, it must not be concluded that anosmia depends on disease actually involving or pressing on the olfactory bulbs, any more than we must conclude that amaurosis from optic neuritis depends on disease involving the optic nerves, optic tracts, or corpora quadrigemina.

So-called "subjective" sensations of smell are occasionally warnings of epileptoid seizures; they are rarer than subjective "auras" of vision, but commoner than auditory auras. They occur in cases where the patient has no smell in the ordinary sense of the expression. They are presumably analogous to the colored vision of amaurotic patients, for patients who are blind are not always in darkness; they are, for example, sometimes "in redness."—DR. HUGHLINGS JACKSON, in *London Lancet*.

Hemorrhoids treated with Ergot.—Dr. G. W. Semple recommends the injection of ergot into the rectum for the treatment of hemorrhoids. A half drachm of the fluid extract was used in half an ounce of water. He refers to Langenbeck's method of injecting ergot in underneath the mucous coat of the rectum, but claims that his own method has the advantage of painlessness and facility of employance by the patient himself.—*Virginia Medical Monthly*.

Hypodermic Injection of Ergot.—Dr. C. P. Williams reports three cases of post-partum hemorrhage treated successfully by means of the hypodermic injection of ergot. He advocates this method as prompt, safe, and efficient. No abscesses or other bad effect resulted. He used the fluid extract, but also suggests using Squibb's solid extract for this purpose, the extract having been rubbed up with water in the proportion of a grain to a minim.—*St. Louis Medical and Surgical Journal*.

Dr. Janeway, of New York, suggests the introduction of the hand into the anus and bowels for the removal of viscera from the dead body. He has thus been able, unobserved, to remove the kidneys, portions of the liver, etc.

Editorial.

Closure of the Paris Faculty of Medicine.—In consequence of the hostile and riotous demonstrations of the students against Prof. Chauffard, the newly appointed Inspector of Medical Studies, the lectures of the Paris Faculty of Medicine have been suspended for the present. The unpopularity of M. Chauffard is due solely to his clerical and legitimist proclivities.—*N. Y. Medical Journal*.

Such occurrences as the above would indicate, are quite frequent in the medical schools of Europe. Some professor becomes unpopular with the students for reasons that are often purely imaginary on their part, and they proceed to demonstrate in such a practical way that the authorities are, for the time, compelled to close the school. We often hear and read of the vaunted superiority of the Old World student, and a' that; but when did there ever occur, on the part of medical students in this country, such riotous conduct as to cause the closure of a school? To the honor and credit of our medical students, it can be said that they acquit themselves in such matters like gentlemen. The result of any dissatisfaction with their teachers is generally given vent in the shape of a whereas or two, followed by a series of resolutions expressing their grievances. Thus the matter generally ends, but with violence and closure of the school never.

The New York Observer is the only religious paper in the country which does not directly or indirectly indorse quackery.—*Ex.*

Not only that, but we regard it as one of our very best religious weeklies. We are not awfully enthusiastic over the religion contained in some of that class of publications, that in every issue endeavor to serve God in their editorial columns, while their advertising space is used to serve Mammon in one of his most obnoxious forms; with one hand uplifted to the Almighty, while the other is lining their coffers with the wages of sin; bewailing the evils of intemperance with one hand, and saying, "Drink stomach bitters, containing more than forty-three per cent. of alcohol," with the other; preaching the doctrine of infant salvation through a crucified Redeemer in one column, and through a poisonous dose of

morphine, in the guise of Mrs. Winslow's Soothing Syrup, in another; telling their readers, in various ways, that it is good Lord and good devil, and it will be wise for them to cultivate the favor of both.

Otto & Reynders.—The copartnership of this old and reliable firm of instrument-makers has been dissolved. F. G. Otto and his two sons will continue the business at the old stand, 64 Chat-ham street, New York, while Mr. J. Reynders has taken a store in the building occupied by the College of Physicians and Surgeons, No. 309 Fourth avenue. The members of the old firm are both so well known to the medical profession, that it is not necessary, on our part, to add any words of commendation.

Cincinnati Hospital Staff Appointments.—At a special meeting of the medical staff of the Cincinnati Hospital, held recently, the following named gentlemen, after a thorough competitive examination of three days' duration, were selected for recommendation to the Board of Trustees for resident physicians for the ensuing year: Dr. S. H. Collins, Dr. Allison Maxwell, Dr. N. Wright, and Dr. W. H. Comegys, of Miami Medical College; Dr. Walter Stallo and Dr. Joseph Watson, Jr., of Ohio Medical College.

The Cincinnati College of Medicine and Surgery.—The commencement exercises of this institution were held February 18th, when twenty-eight gentlemen were added to the ranks of the medical profession.

The air which ventilates the Houses of Parliament passes through filters of cotton-wool. The appearance of the filters, after having been used, is startling indeed; they are of a heavy, murky brown color, thick with dust and organic impurities. The sieves through which the air is first passed have deposited near them quite a heap of intercepted particles.—*Druggists' Circular.*

Reviews and Notices.

A Practical Treatise on the Medical and Surgical Uses of Electricity. Including Localized and General Faradization; Localized and Central Galvanization; Electrolysis and Galvano-Cautery. By GEO. M. BEARD, A.M., M.D., and A. D. ROCKWELL, A.M., M.D. Second edition, revised, enlarged, and mostly rewritten, with nearly two hundred illustrations. New York: William Wood & Co., Publishers.

Since the first edition of this work was issued in 1871, there has been published quite a number of monographs on the subject of electricity, all of which have contributed in a greater or less degree to our knowledge of this subtle but valuable therapeutical agent. None of them, however, has taken the place of this work, by Drs. Beard and Rockwell, as a standard text-book for general use by the medical profession.

Electricity in its various applications has come into such universal use that the general practitioner is no longer able to get along satisfactorily, either to himself or patrons, without the possession of a battery of some sort—the intelligent use of which, in order to obtain the best possible results, can be acquired in one-tenth of the time by the aid of such a work as this by Drs. Beard and Rockwell. The first part of the book is devoted to electro-physics, in which the merits of static and voltaic electricity are discussed, with a description of various electrical machines, including a chapter on each of the following subjects: Electrolysis, thermo-electricity, and Ohm's law, which is recognized as the basis of all electrical measurements. "*The quantity of electricity passing through any point in a circuit, varies directly as the electro-motive force, and inversely as the resistance.*"

Part Second takes up the subject of electro-physiology, which is defined to be "the science which treats both of the laws of animal electricity, and also of the phenomena produced by the action of electricity on the body in health." Experiments are narrated, showing the effect of electricity when applied to the different nerves and muscles, also its effect on the blood and nutrition, and finally its relation to life. Part Third is devoted to the important subject of electro-therapeutics, or the study and application of electricity

in disease. When to apply the agent, where to make the application, length of application, and how to proceed, is so plainly stated that the veriest tyro might understand.

The comparative value of the different currents is fully explained. A large number of clinical cases, representing a variety of both acute and chronic diseases, are reported, showing the results of treatment by electricity. As would naturally be supposed, our authors are enthusiasts on the subject of electricity and its curative powers, which are sometimes almost marvelous, and often accomplish desirable results where other remedies utterly fail. However, they have done their work well, and given the medical profession the best work on the subject that is published in the English language.

For sale by Robert Clarke & Co. Price \$6.25.

Compendium of Children's Diseases. A Hand-book for Practitioners and Students. By Dr. JOHANN STEINER, Professor of the Diseases of Children in the University of Prague, and Physician to the Francis Joseph Hospital for Sick Children. Translated from the second German edition, by LAWSON TAIT, F.R.C.S. New York: D. Appleton & Co., Publishers.

The value of this work needs no further attestation than the fact that so eminent a teacher as Lawson Tait has seen fit to translate it into the English language, occasionally adding notes to the original. We can not but admire the systematic method adopted by the author in his treatment of the various subjects under consideration, as, for instance, we find he invariably describes the anatomy, symptoms, causes, diagnosis, prognosis, and treatment of the various affections of childhood in regular order, without superfluity, and yet embracing the whole subject, giving it in terse language. The translator has added an appendix, giving the rules for the management of infants, issued by the staff of the Birmingham Hospital for sick children. The work can not properly be called a hand-book, as it consists of over four hundred pages of printed matter, and is altogether more elaborate and superior to that class of books.

For sale by Robert Clarke & Co.

The History of the Reign of the Emperor Charles the Fifth. By WILLIAM ROBERTSON, D.D. With an account of the Emperor's Life after his Abdication, by WILLIAM H. PRESCOTT. New and

revised edition. In three volumes. Vol. I. Philadelphia: J. B. Lippincott & Co., Publishers.

This volume of Prescott's histories gives an excellent view of the progress of society in Europe, from the subversion of the Roman empire to the beginning of the sixteenth century, recording the effects of the Roman empire on the state of Europe, the emancipation of the peasantry, and the beginning of a regular administration of justice, and the consequent revival of learning.

The age of Charles the Fifth is considered to be the period at which the political state of Europe began to assume a new form. Our historian mainly confines himself to a record of the occurrences and transactions of this period, the effects of which have proven to be universal or permanent in their character. The reader can not but be fascinated with the style of the author, which makes what would otherwise be dry details of current events the most interesting reading. Wherever they find a place on library shelves, they will also find eager readers.

For sale by Robert Clarke & Co. Price \$2.25

General Paralysis. A critical Review of the Literature of the Subject. To which is appended an analysis of the case of John S. Blackburn, in which insanity was alleged as a means of defense. By D. A. MORSE, M.D.

This paper was read at the last meeting of the Ohio State Medical Society. The author begins his paper by calling attention to the importance of a knowledge of medical jurisprudence by physicians, referring to the testimony of expert or skilled witnesses in judicial cases, and their responsibility in that relation. The subject of general paralysis is then taken up, in which the author gives a very complete resumé of the literature of that disease, briefly noticing the views of writers prior to 1826, and making copious extracts from authors who have written on the subject since that date. The latter portion of the paper contains the author's views of the case of John S. Blackburn, who was tried for murder in 1871, and is now confined in the Hospital for the Insane, at Athens, Ohio. After giving a very full history of the case, so far as it refers to his physical and mental condition, with that of his ancestors, there being hereditary taint, he expresses the opinion that he is suffering from general paralysis.

Eating for Strength. A book comprising: 1. The science of eating; 2. Receipts for wholesome cookery; 3. Receipts for wholesome drinks; 4. Answers to ever-recurring questions. By M. L. HOLBROOK, M.D. New York: Wood & Holbrook, Publishers.

This little book is designed for popular use. It contains some plain statements in regard to digestion, but is mostly made up of recipes for cooking and preparing palatable drinks, many of which are excellent, a knowledge of which would be no disadvantage to physicians.

Dental Pathology and Surgery. By S. JAMES A. SALTER, M.B., F.R.S., Dental Surgeon to Guy's Hospital, etc. New York: William Wood & Co., Publishers.

It is no infrequent occurrence for the general practitioner of medicine to be called upon to perform operations in dental surgery, and very often his patrons apply to him for advice in regard to operations to be performed by the dentist, making it necessary for him to have a knowledge of the subject in order to be able to give an intelligent and correct opinion. We know that physicians very frequently ignore the subject of dental pathology and surgery, preferring to send all such cases to the man who has made a specialty of this subject. That may do very well in large towns and cities; but even there, the people feel that their physician should be better qualified to give advice in a troublesome case than the dentist. Such being the case, it gives us pleasure to commend a work like this, by Dr. Salter, to the general practitioner of medicine. The anatomy of the teeth and the surrounding structures is given in the first chapter, following which is taken up the functions of the teeth in their relations to mastication, touch, and as passive organs of speech, with modes of application of the tongue to the teeth in articulation.

The proper remedies for the various diseases affecting the teeth and surrounding structures are given with care. The work is well illustrated by one hundred and thirty-three wood-cuts.

For sale by Robert Clarke & Co. Price \$4.50.

On the Treatment of Pleurisy. With an appendix of cases, showing the value of combinations of croton-oil, ether, and iodine, as counter-irritants in other diseases. By JOHN W. CORSON, M.D. New York: William Wood & Co., Publishers.

This little volume is published to show the result of observations of more than five hundred cases of pleurisy. On the subject of

counter-irritants, the author states that: "Among these poor (dispensary patients) we soon learned to dread the exhaustion of large fly-blisters. In the latter half of the management of these dispensary cases, there was found a far better substitute for blisters; it was the alternate application of iodine and croton-oil," accompanying the mild counter-irritants with equally mild internal medication. In this class of cases we most heartily indorse such a course of treatment. With a physically different class of people, we should prescribe the fly-blisters, expecting to get more immediate beneficial results, at the same time using more active internal remedies.

For sale by Robert Clarke & Co. Price 50 cts.

Pulmonary Tuberculosis: Its Pathology, Nature, Symptoms, Diagnosis, Prognosis, Causes, Hygiene, and Medical Treatment. By ADDISON P. DUTCHER, M.D., late Professor of the Principles and Practice of Medicine in the Cleveland Charity Hospital Medical College, Ohio. Philadelphia: J. B. Lippincott & Co., Publishers.

If there is one disease that is more than another the bane of the human family, it is pulmonary consumption, as a very much larger per cent. annually die of this disease than from any other cause. Consequently, it has received great attention from the medical profession from remote antiquity to the present day, and on account of its great importance to humanity, any man who adds but a single modicum to our knowledge of this disease or its treatment, may well be said to be a public benefactor. Our author says he claims no special originality for his work, but having given the subject a great amount of study for a series of years, adding his own experience to that of other writers, he gives us a very readable book, and which, for its practical value, should find a place in well-selected medical libraries.

The author regards Thomson's gingival margin as the most valuable sign of pulmonary tuberculosis, in its first stage. He says of it: "Although not infallible, yet, in the great majority of cases, tubercular disease may be inferred when it is present." During the past twenty years, he has kept a brief record of two hundred cases of tubercular disease of the different organs of the body. Out of this number, the margin was present one hundred and seventy-five times, and was more frequent in males than in females—making its appearance much sooner in the young than in the old; in some cases anticipating the development of the local disease for two or

three years, but commonly the disease succeeds the appearance of the streak in a very short time. The early appearance of the streak is an unfavorable circumstance, as such cases usually run a short course. On the subject of alcoholic stimulants—their influence as therapeutical agents in pulmonary tuberculosis—he makes the assertion, that: “From a faithful examination of this subject for many years, I candidly confess that I have never been able to see that alcoholic stimulants have the least influence as a remedy in arresting or retarding tubercular disease.”

Lecture on Disease of the Hip-joint. By LEWIS A. SAYRE, M.D., Professor of Orthopedic Surgery in Bellevue Hospital Medical College, New York. E. C. SEGUIN, M.D., Editor. G. P. Putnam's Sons, Publishers.

This is the first of a series of American clinical lectures that are being published by G. P. Putnam's Sons, under the editorial supervision of Dr. E. C. Seguin. We can not but commend the enterprise that proposes to furnish the medical profession with a series of practical lectures on important subjects, by prominent teachers, at a price that places them within the reach of any and every practitioner of the healing art. Dr. Sayre concisely gives the ordinary history, course, and termination of hip-joint disease, with his method of treatment, which we know, from personal observation, has been eminently successful. His experience with this class of affections has been varied and large; his teaching is that of one who speaks by authority.

For sale by Robert Clarke & Co. Price 40 cts.

Migrants and Sailors, considered in their relation to the public health.

This pamphlet of twenty-one pages consists of two papers, reprinted from Reports and Papers, Vol. I. American Public Health Association—the first, on some defects in the immigration service affecting the sanitary interests of the country, by John M. Woodworth, M.D., Supervising Surgeon U. S. Marine Hospital Service, and the next, on sailors as propagators of disease, by Henry Smith, M.D., Surgeon U. S. Marine Hospital Service. Dr. Woodworth, in his paper, calls special attention to the necessity of governmental supervision of migrants, compelling ship-owners to adopt measures that will give the greatest security of both life and health to the emigrant. Dr. Smith's paper is illustrated by cuts, showing

how badly the sailors' quarters are ventilated, with their location in some of the first-class ocean steamers. The wonder to us is how any set of men can be kept through a sea voyage in a physical condition to attend to the arduous duties of the sailor. He likens some of the most gorgeous specimens of Sound and river boats "to painted harridans—beautiful only in spots."

Transactions of the Medical Society of the District of Columbia.
Vol. I., No. 4, January, 1875.

This is made up entirely of clinical reports, no papers on special subjects being included. The society is evidently in good working condition.

Reflex Irritations throughout the Genito-Urinary Tract, resulting from Contraction of the Urethra, at or near the Meatus Urinarius, congenital or acquired. By FESSENDEN N. OTIS, M.D.

This interesting and valuable paper was read before the New York Academy of Medicine, February 19, 1874. The paper contains reports of a number of cases which go to show that one part of the body may be the seat of a painless affection and at the same time cause distressing symptoms in some other part. Various reflex phenomena are frequently observed in cases of irritation of the genito-urinary canal.

Delirium in Typhoid Fever.—In the treatment of this complication remember that it is owing to brain-irritation, not to inflammation. There is one great remedy for this, and it is alcohol; alcohol is the remedy for nervous irritation in typhoid fever, and, in fact, in any fever. How it acts is not certainly known, but it may be laid down that it is an important point in the treatment of all fevers. It allays nervous irritation and soothes the nervous system.—*Sir W. Gull.*

Consumption of Apples in Paris.—The Parisians devour 100,000,000 of apples every winter. An eminent French physician thinks that decrease of the dyspepsia and bilious affections in Paris is owing to the increased consumption of this fruit, which, he maintains, is an admirable prophylactic and tonic, as well as a very nourishing and easily digested article of food.

THE CINCINNATI
LANCET AND OBSERVER.

J. C. CULBERTSON, M.D., Editor.

VOL. XVIII.—APRIL, 1875—No. 4.

Original Communications.

Art. 1.—Complementary Parts of Disease.

By ALEX. McBRIDE, M.D., Berea, Ohio. Read before the Cuyahoga County Medical Society, at Cleveland, December, 1874.

We have no substantial evidence that any new disease or feature of disease has been developed during historic ages; but we frequently find manifestations or facts of disease which have been disregarded or forgotten.

The materials of medical knowledge are so vast, and their manifestations so diversified and separated by such wide intervals, that the human mind, in grasping and striving for the present, actually forgets or ignores the past. My mission of to-day is to remind the profession of some facts of disease which have long been forgotten or overlooked. I propose to call the attention of the profession to the fact that by carefully observing symptoms, apparently innocent, we can sometimes be prepared to meet those which are grave or serious.

I propose to treat of COMPLEMENTARY parts of disease—those symptoms and signs which are sure precursors of something to

come, or which may with certainty be expected to follow that which has already appeared. I do not propose to treat extensively of symptomatology, but to point out the phases of some of those diseases whose different parts or stages are so far separated by time and contrariety of feature, as to appear to be different diseases, or to have no connection with each other.

When Dewees, a man for whom I have great veneration, wrote that the non-appearance or stoppage of the lochia, at an early stage of the puerperal state, was, *per se*, no cause for apprehension or alarm, he wrote perhaps what was true in a strict sense; but, nevertheless, it must have mislead many. For in a practice of almost thirty years I have seen no case of such stoppage but what was soon followed by inflammatory symptoms. It would have been true if he had said such stoppage should always, as a matter of safety, be regarded as the precursor of a grave inflammatory disease. He would thus have prepared the student for the exercise of the high attribute of the physician—caution. The fact is that stoppage of the lochia is primary or initial, and puerperal fever is complementary, of a grave disease. It may be objected to this illustration that puerperal inflammation is said to occur without stoppage of the lochia; but if such be a fact, it proves an exception to which all the rules of disease are liable.

A more illustrative case is that of cholera infantum. The physician's attention is called to a child with an extensive display of heat-rash. He advises—"Let the child be dressed in light clothes, and well aired." Some days, or it may be weeks, later, he is called to see the same child, and finds it pale and shrunken, the eyes sunken, and with a copious, serious diarrhea and vomiting. The case is *cholera infantum*. Now, it does not happen that all cases, or nearly all, of *lichen tropicus* are followed by cholera infantum, no more than it happens that all cases of measles are followed by pneumonia; but it probably happens in all cases of sudden retrocession of the rash. Neither does it happen in all cases of cholera infantum that we can demonstrate the pre-existence of heat-rash; but it is a general fact that these conditions bear to each other the relation of initial and complementary parts of the same disease.*

* Two years ago, I announced to this society, and published the same in the *LANCET AND OBSERVER*, the fact here mentioned, of the relation between heat-rash and cholera infantum. Since that time, I find several physicians have confirmed my observations.

Now, we take a case of greater range of sequences. A woman complains that she has paroxysms of palpitation of the heart and dyspnœa, coming on suddenly and without warning; dizziness and general discomfort when she knits or sews; belching; flatulence; rumbling of the bowels; a pain near the apex of the heart; pain at the middle of the left arm; hysterical convulsions, and numerous other distresses, which she will talk eloquently upon for an hour. Then, added to all this, in some cases, she has a troublesome cough and soreness all over the chest; but notwithstanding she is supposed to have consumption, she has lost no flesh. When the doctor presses his thumb on the cervical and dorsal vertebræ, and finds great tenderness, she is surprised—she did not know it before. Many intelligent physicians understand this case, but there are many thousands who do not. I have known respectable and educated doctors to treat such cases for consumption. I have known others to treat for spinal disease; and the fact that cauterizing the spine relieved more or less all the symptoms, encouraged them to persevere. Valerian and a variety of stomachics are used; and, for the pain in the side, blue-pill is sometimes used, which makes matters worse. In the entire range of disease, there is perhaps not another instance where such an extensive train of unhappy symptoms results from a cause so remote and apparently insignificant in the beginning. The woman is astonished and incredulous when told that this entire train of unhappy consequences has resulted from leucorrhœa, which had its beginning some years previous. But this is the fact; and to this there may have been added displacement of the uterus. Some will object to this explanation, and say the spinal irritation was the first link in the series of sequences. But of this view I have seen no proof. I know this—that curing the leucorrhœa and malpositions of the uterus, if any exist, cures the whole series of reflex ailments. How the morbid condition of the genital system causes spinal irritation is not clear, but the cause of the reflex symptoms which follow this is not so obscure. This I take to be a good illustration of complementary parts of disease.

A woman, near middle age, complains of aphonia; of being at intervals suddenly overcome with loss of strength; of periods of sweating; urine pale, and sometimes discharged very copiously; a general loss or lacking of strength. These symptoms are not constant, but frequently repeated, without any apparent provocation. A proper examination will reveal a large, flabby uterus. Such

cases are apt to undergo treatment for whatever disease is in vogue at the time. It makes a very good case to treat for oxaluria. The case is relapsed uterus, and a proper use of ergot will cure it promptly. Iron may follow.

A woman presented herself, with an obstinate eczema covering one side of the face. I was so strongly impressed with the belief that such eruptions were complementary of some form of internal disease that I investigated. I found that she had severe dysmenorrhea. Further research proved that there was narrowing of the cervix, and great irritability or cervicitis. The proper treatment of these latter conditions cured her face, and the cure was permanent. It is not claimed that these connections are constant; nothing is constant in disease. With our greatest research, we can arrive only at general facts.

In this connection, it may be remarked, as further illustrative, that endometritis is sometimes accompanied with a pain in the hip, which has been mistaken for coxalgia, and treated accordingly.

A patient applies, complaining of headache, more or less severe. There are no other symptoms. He calls from day to day; the pain is not intermittent; there are no collateral symptoms to indicate a fever; no evidences of gastric derangement; it is simply a headache. We may suppress it with aconite for a while, but quinine will not remove it. Dyspepsia or indigestion is suggested, but we find neither. Now this condition is initial to something which is to follow.

Experience has taught me, in a case of this kind, to look with confidence for an eruption of some sort; it may be of tertiary syphilis, in the form of nodes, caries, or any other form. It may be a series of boils or carbuncles. After one or the other of these appearances, the headache disappears. Syphilis may have laid dormant for many years, but when it breaks out, headache will precede it.

There is much reason for the belief that most of the cutaneous eruptions are complementary of internal disease—in fact, all except those which are *contagious*.

Take, for an example, acne. We will not be particular which form, but will say the indurata and rosacea. Although it is not difficult to cause its temporary disappearance, no amount of local treatment will cure it. It is generally supposed to be connected with sexual irregularity of some kind. I am convinced that it has another cause. I find that all those persons, of either sex,

who have acne badly, are great eaters—ravenous eaters. I never interrogated one closely, who did not confess that his appetite was nearly uncontrollable. This fact points to the stomach and duodenal portion of the bowel as the seat of the disease. Let these localities be relieved by proper evacuants, and kept relieved by temperance, and the trouble is relieved.*

Herpes zoster, although obscure as to its connections, is very clearly the complement of something internal.

Rubeola and scarlatina may be considered in connection. Every physician of several years' general practice must have seen cases or an epidemic in which there was a mild pneumonia or pleuropneumonia, or perhaps bronchitis, or all three, accompanied by a rash resembling scarlatina and measles. Also a similar epidemic, or sporadic cases, of a similar rash, with a considerable degree of inflammation about the throat, usually including the tonsils. The point to which I invite your attention in these cases is that these inflammations are seldom very severe when the rash co-exists. Physicians are generally in doubt as to whether these cases are scarlatina or not. For their safe treatment, little else is necessary than to favor the continuance of the rash. The rash and the phlegmasiæ are complementary of each other, and together constitute one disease.

Whatever the last-mentioned cases should be called, they hardly differ, except in degree, from their graver prototypes, scarlatina and rubeola; for the eruption of measles is but the completion of a disease which was originally a slight congestion of the lungs, or more especially of the bronchial lining, and the eruption of scarlatina bears a similar relation to the region of the throat—so that when either of these retrocede, they merely resume their first position. (These diseases might, with propriety, be called metastatic diseases.)

These facts should call attention strongly to consider whether pure pneumonia should not have as its complement a rash. But without any theory of the kind, men always have, in severe cases of pneumonia, adopted a practice based upon such a theory. For

* It is nearly impossible to carry out these indications, for the reason that a ravenous appetite can not be controlled. Arsenic is the medicinal remedy. It seems to be generally supposed that arsenic produces its alterative effect directly on the skin. From my experience in treating chronic diarrhea with arsenic with great success, I am of the opinion that this remedy cures cutaneous diseases by curing the internal diseases upon which they depend.

what do we use blisters, sinapisms, and similar appliances, but to produce revulsion, by creating a rash or vesication, thus restoring the balance between initial and complementary parts?

Now let us consider that class of eruptions called *tinea capitis*, which occurs in children, for the term embraces at least both vesicular and pustular eruptions. From this we will exclude favus, which is topical and contagious. Now, what physician of experience dare attempt to suppress this disease by drying it up with no matter what remedy? He would expect, with confidence, to find soon after one or other of those forms of disease which we call hydrocephalous, encephalitis, cerebritis, meningitis, and the like.

On the other hand, what has been the most successful means of treating this last-named class of diseases? As a general rule, we expect patients thus affected to die. Sometimes, however, by the use of powerful alteratives they are saved, but almost never by the use of cold applications. But if the doctor has boldness enough to apply a blister nearly all over the scalp, he will have greater success in saving his patient. This every man knows who has tried it, but it is not done often because it looks so *terrible* in the eyes of the uninformed. Why does this apparently severe means save the patient? In my opinion, because it restores the balance of power—the other part of the disease—the complementary part. And here I will depart somewhat from my plan, and indicate a special method of treatment. It is not necessary to shave the scalp and apply a plaster. Cover the scalp with cantharidized oil, or tincture of cantharides, and then cover with oiled silk, a greased cloth, or green leaves, and you will have blister enough.* If the patient survives, you can remove the hair afterward, if necessary; and it will not look so bad when the patient is recovering. Some may think this case too strongly put, but I think not; and, if correct, it is one of the best illustrations of complementary parts, or, as some might prefer the expression, “transferable diseases.”

But nothing can more strongly illustrate the antagonism between internal and external disease than tertiary syphilis. When

* It may not be generally known that a blister can always be promptly raised by a mixture of one part of tincture of cantharides with one or two parts of any kind of oleaginous liniment, such as camphorated oil and tincture of cantharides, equal parts; apply freely on a linen rag, and cover with oiled silk or green leaves. This saves all the *horrid* appearance of a blister plaster. It will generally answer the purpose sufficiently well to apply the plaster or blistering lotion about 2x5 inches down the nape of the neck.

there are copious manifestations of the disease on the skin and subcutaneous tissue, the bones and other internal parts almost wholly escape. The most deplorable case I ever saw was one in which there had been no external manifestations of any kind. Hence the excellence of iodide of potassium and guaiac, and other medicines which determine to the surface.

Rheumatism is a disease proper to be considered in this connection. This disease presents four parts which are worthy of consideration: 1. Arthritic and muscular or fibrous rheumatism; 2. Endocarditis, or cardiac rheumatism; 3. Symptomatic phrenitis; 4. Cutaneous eruptions, which may be vesicular, or a punctate rash resembling scarlatina. I do not know how many have observed this latter appearance, but I have had it under observation for several years.

General rheumatism and endocarditis are one and the same disease, and may co-exist, but it is more common to find the cardiac complication following the disappearance of the arthritic disease. When they co-exist, the cardiac complication is less grave than when it exists primarily, or follows the disappearance of the arthritic form. Hence the danger of suppressing the arthritic disease by ordinary local applications; for, inasmuch as they cause no elimination, the elements of the disease remain in the body, and are very liable to locate on the endocardium. The frenzy which is liable to follow is not disease, but a symptom. I remember hearing of metastasis of rheumatism to the brain; and it has been my fortune twice during my life to correct reputable physicians who were vigorously treating for phrenitic cases which they should have treated for endocarditis. But the point to which I wish to call strongly your attention is the eruption which many times accompanies rheumatism. As before stated, the eruption is sometimes vesicular, and at other times a punctate rash, occurring on no particular part of the body, and seldom or never very copious. I have not yet derived anything positive from this eruption, except that the violence of the disease appears to be moderated by its irruption. Is not this rash or eruption an effort at something compensatory or complementary? The effects of certain kinds of treatment seem to indicate that it is. Now, there are three modes of treating rheumatism. These are the *eliminative*,* the *abortive*, and the *derivative* or *compensative*. Of the

* The method by alkalies or acids, or both, I include among the eliminative, for they act as diuretics.

eliminative, I shall say nothing here. The abortive is applicable early in the disease, and the remedies are quinine and opium, either or both. The effect of opium, when used with sufficient boldness in the onset of the disease, is to arrest the pain, produce sweating and an eruption similar to urticaria, or, if no eruption, severe itching all over the body; and after this occurs, the general symptoms soon abate. The action of quinine is less marked and less effective.

The derivative or compensative method is by blistering. We have, of late, testimony from several sources that rheumatism, after having endured for a considerable time, has been rapidly cured by blistering. The blisters are drawn upon the chief seat or seats of the disease; but I am of the opinion that it is not very important to what part of the body they are applied. The cure, in this case, can hardly be owing to the evacuation by the blistered surface, and the amount of evacuation by the kidneys is not large. The revulsive action of a blister is considerable, it is true; but are all these sufficient to cure an established obstinate disease? It is my opinion, judging from analogy, that the cure results from the restoration of the lost element—the complementary part.

Before dismissing the subject, I will present one more view of the matter. Nearly twenty-five years ago, I treated the case of a boy who was slowly dying with softening of the heart. It was a case of cyanosis, the boy having been feeble from birth; and he was now twelve years old. During his final decline of about three months, he was frequently seized with sharp pains in different parts of the body. The seizure and location of these pains did not appear to be governed by any rule. The pain would be in a finger, the face, jaw-bone, or in the intercostal muscles, or anywhere as it might happen. They were generally of brief duration, though sometimes lasting for hours. They were what I may call small, sharp pains. After the boy died, the autopsy showed softening of the heart and non-closure of the foramen ovale. Shortly after this, I attended a young woman during her decline with valvular disease. She, during many weeks, had similar pains, sometimes of great severity. The autopsy showed a case of literal “breaking of the heart-strings”—the poetic expression verified. The chordæ tendineæ of the mitral valve had parted, and the valve had for weeks fluttered to and fro through the orifice. Subsequent observation has shown me that there is a nearly constant relation between cardiac disease and fugitive acute pains in various parts

of the body. So much so, that for many years it has been my habit when a patient complains of the frequent recurrence of flying, lancinating pains, to look for disease of the heart; and I am seldom or never mistaken, except in the case which I shall presently mention. It appears to make little or no difference what the character of the cardiac disease is, whether valvular, pure hypertrophy, dilatation, or softening. So much have I been guided by these pains, that, in the case of a young girl who was seized rather suddenly with pain of great severity in the eyeball or orbit, failing to perceive any other cause, I examined the heart, and readily found the valvular action very much disordered. The pain was soon relieved by morphine, but it was some years before valvular action was perfect.

The exception above alluded to is certain cases of dyspepsia. Some cases of dyspepsia give rise to the same or similar kind of pains, but of less severity. But in all such cases it will be found that the heart is functionally disordered. From the consideration, then, of both classes of cases, we derive this maxim, that a continuous recurrence of fugitive lancinating pains in various parts of the body (chiefly in the fibrous tissues) is indicative of cardiac disease—organic generally, but sometimes functional; or, to express the same concisely, the kind of pains above described are *complementary* of cardiac disease.

The complementary feature of disease might be treated at greater length, and its application shown in many cases.

Art. 2.—Treatment of Puerperal Eclampsia.

A paper read before the Alumni Association of Miami Medical College, January 7, 1875. By H. ILLOWY, M.D., formerly Resident Physician Cincinnati Hospital.

Dinah F., æt. 17; native of New York; medium sized, but well formed and fleshy; weight between 190 and 200 pounds; daughter of a butcher. Became pregnant (out of wedlock), and was sent here by her relatives to await delivery. Hygienic surroundings very bad; living on Pleasant street, in a small old frame building occupied by a large family, sleeping in a low attic room, badly ventilated and fearfully hot in summer.

On the 21st of July, 1873, while in the house visiting a little patient, the mother of my patient desired me to prescribe something for the young woman, whom I now saw for the first time, as she was suffering from a severe headache that day. I was also informed, that since the last few days, on rising in the morning, she always vomited, but that the nauseous feeling soon disappeared, and she was well for the rest of the day, and went out among her friends and seemed to enjoy herself. Her appetite was good right along, and there were no complaints on her part, to cause her friends any uneasiness. I was also informed that she considered herself about eight months gone.

I must remark, right here, that I was not requested to attend the case, but merely to give her something to relieve the momentary affliction.

Deeming it brought about by the great heat, she being a person of full habit and sleeping in a hot and ill-ventilated attic, right under the roof, I advised a couple of Seidlitz powders to be taken, and also ordered her R Potass. bromid. 5ss., two such powders—one to be taken immediately, and the other in two hours if the headache were no better.

Her face was somewhat pale and presented a rather bloated appearance. Soon after I had left the house she complained of a terrible feeling in her head, and immediately took one of the potass. powders, but vomited it. This was about 10 A. M. At half-past one in the afternoon she was seized with a convulsion, and I was sent for.

On my arrival I found her lying quietly on the lounge, with her face somewhat flushed. I had not been there, however, five minutes, when she was again seized with a convulsion—one of those terrible convulsions so eloquently described by Dr. Fordyce Barker, and the horrible features of which will forever remain impressed upon my mind. I immediately applied chloroform, by inhalation, and succeeded in cutting the duration of the spasm somewhat short. During the convulsion her face became intensely congested, and presented the dark-blue appearance associated with asphyxia.

She soon recovered from the semi-comatose condition, and understood what was said to her.

I had her immediately removed from the lounge to the front room, much better ventilated, and placed in bed, and all her stays and garments loosened. It required four strong men to carry her in.

Toward 3½ p. m. she was bled, ʒvj. I then ordered the following: R Potass. bromid. ʒj; chloral hydrate, grs. xv. M. (*in a vehicle*.) every two hours.

After this blood-letting she seemed much better, there being no return of the convulsions. She seemed to be doing well; knew everybody about her, and said she felt better. Her pulse about 120.

Toward 6½ p. m., when I returned to see her, she was again seized with a convulsion. Chloroform was again used. The spasm over, I had her left arm tied up, and bled her, *pleno rivo*, about ʒxlv; and here happened what seemed to me rather remarkable—while the blood was flowing in a full stream, from a free and good-sized orifice, she was seized with a convulsion.

Four or five convulsions now followed in rapid succession. The chloroform (by inhalation) was used, and applied on the least evidence of spasmodic action. Under its use the convulsions became less violent, and the intervals between each longer. I ordered her a purgative R Pulv. jalap. co., ʒj; calomel, grs. x. M., three such powders; one every half hour. Also had cold applications made to the head.

Toward 8½ p. m. the purgative began to act, and she had three large watery evacuations. Once while on the chamber (there being no bedpan in the house), she was seized with a convulsion. The stupor following, however, was of short duration; she soon became fully conscious; had another evacuation; said she felt much better, and requested to have a cup of coffee brought to her, and spoke to a lady who had just come in, recognizing her perfectly and addressing her by name.

Several doses of the potass. bromid. and chloral hydrate mixture having been given, and no visible effect produced by it, and it being necessary to keep up the inhalation of chloroform, the mixture was abandoned; I not liking to use chloral internally and chloroform inhalations together, for reasons which are self-evident. Besides the cold applications to the head, I had her legs, almost to her knees, wrapped in flannels soaked in a hot and strong infusion of mustard and then wrung out.

Toward 11½ p. m. it became evident that she was having labor pains (*although she had stated that she was only eight months gone*). I made an examination, and found the os rigid and closed.

At 1 a. m. made another examination, and found the os slightly dilated and softer. I also introduced a catheter into the bladder,

and drew off about twenty drops of urine, which seemed rather clear.

Up to 1 A. M., upon the cessation of the convulsion, consciousness always soon returned—that is, if spoken to she would answer properly; but from that time on, the condition following the convulsion, although not one of coma, was a sort of heavy stupor. If questioned she would look around, but make no motion as if she had understood. Later on with the pains, the convulsions became more frequent—a convulsion following, as it were, on the heel of every pain; there was first a cry, such as is peculiar to parturient women, and almost immediately upon it the convulsive seizure.

I now dispatched for aid, so as to have the labor finished as rapidly as possible, being myself under the necessity of attending to the chloroform inhalations, so as to mitigate as much as possible, by that means, the severity of the convulsions; but it required more time than was desirable in getting another physician.

At 6½ A. M. the labor was finished by the forceps, and she was delivered of a fully developed male child, (which was dead,) showing that she was wrong in calculating herself only at eight months. I removed the placenta without any difficulty, and the uterus contracted very nicely.

From between 4½ and 5 A. M., with the increased severity of the labor pains, the convulsions became fearful; more violent and of longer duration than any that she had previously had.

After the delivery there was again a period of seeming improvement; consciousness had somewhat returned, and she was free from convulsions. I began to indulge in the hope of her recovery. At 7½ A. M., about three-quarters of an hour after the completion of delivery, she was again seized with convulsions. Dr. Bettmann, the physician called in in the morning, continued to see her with me that day. The hopelessness of the case was recognized. The inhalation of chloroform was kept up; a hypodermic injection of morphia (about ½ gr.) was given; but all without effect. The convulsions returned at intervals of three-quarters to one hour—no lucid interval between them.

At 7 P. M. death ensued. No post-mortem examination was allowed.

I will state right here that afterwards, on speaking to the lady, in whose house this case occurred, about this unfortunate young woman, she told me that for some time previous to the attack, she had had trouble with her urine; that it burned her in passing it;

that she would frequently go to the water-closet to urinate, but only succeed in passing a few drops; that the young woman had asked her about it; but that she had advised her that it was due to her pregnant condition, and would be better after that was over.

If there is any disease that requires on the part of the physician a certain method of treatment, it is puerperal eclampsia. There is no time for any expectant treatment, no time to look over, and indeed very little frequently for consultation; for, everything else excepted, the frequent repetition of the convulsions will alone endanger life. It is therefore the most urgent promptness and certainty as to a course of proceeding that is required.

But right here is the *questio vexata*: What line of treatment shall we pursue?

Dewees, the great American obstetrician, has divided puerperal eclampsia into three classes: The apoplectic, the epileptic (between which two there is certainly no difference, as he describes them, and which he also treats alike), and the hysterical. In the two former, he bleeds, *pleno rivo*, in the full signification of the term. In his essay on puerperal convulsions, he reported several cases in which the amount of blood drawn seems rather remarkable. In Case I. he drew off 3lxxvii of blood from 9 A. M. to 10 P. M., besides 3x by cups. In the next twenty-four hours this patient lost about forty ounces more, drawn in quantities of 3x. But Case II. is more remarkable, for within six or seven hours that patient was deprived of one hundred and forty ounces of blood. Stimulating injections, purgatives, and cold applications to the head are the other remedies.

Velpeau, in his "Midwifery," recommends bleeding, but not to that extent. He says: "We commonly begin with a general bleeding of six, eight, ten, twelve, or even fifteen ounces, according to the severity of the disease and the constitution of the woman. After the first venesection, if it appears to produce some amelioration, it is repeated a second time, a third, or even a fourth, at intervals more or less considerable, always remembering that in this way the strength of the patient is rapidly exhausted." Meigs, the translator of Velpeau, however, seems to differ decidedly with the author as regards the quantity. In a foot-note he says: "M. Velpeau does not dwell with sufficient emphasis upon the use of blood-letting. In this country, the amount of blood drawn for the cure of puerperal convulsions is only determined by the ability of the patient to bear its loss. I should be more pleased if M. Vel-

peau would recommend, instead of fifteen, the abstraction of twenty or forty ounces; for, whatever the cause of the attack, it is attended with great determination of blood to the brain, and no time should be lost in reducing it by the promptest mode—*videlicet*, blood-letting."

Cazeaux, like Velpeau, although holding bleeding as the remedy *par excellence*, does not advise pushing it to the extent recommended by Dewees and Meigs. He prefers additional bleeding, if it become necessary (after a first or second bleeding by the vein), by leeches, with such aid as sinapisms to the lower extremities, Junod's boot, and blisters to the nape of the neck afford. The use of the tartar-emetic mixture of Collins and Johnson is also recommended. The use of antispasmodics, as recommended by Velpeau as adjuvants in the treatment, he regards as wholly useless.

Cazeaux recognizes only one form of the disease, making no division, as other authorities upon this subject have done.

Smellie, Denman, and Ramsbotham recommend bleeding, *pleno rivo*.

Dr. Fordyce Barker, in his "Clinical Lectures," published in 1874, also recommends bleeding, but not to the extent nor so frequently repeated, as advised by others. He extols the use of chloroform, and is of opinion that by it the mortality from this disease will be greatly reduced. He also recommends the hypodermic injection of morphia, to allay the nervous irritation and prevent the return of the spasms.

The use of opiates in eclampsia is very emphatically forbidden by almost all authorities upon the subject. Dewees, in his Essay on Puerperal Convulsion, Case VII., ascribes the death of the patient to the laudanum administered by the physician in attendance upon the case. Cazeaux also banishes opium from the list of medicaments for this disease; still, in anæmic patients, where blood has been freely abstracted, he thinks it might, perhaps, be used with advantage by acting as a sedative to the nervous centers.

Dr. Tate, of this city, in a paper on this subject, read before the Academy of Medicine, also recommends free bleeding. He does not view very favorably the inhalation of chloroform, so highly extolled by Dr. Barker, and of which Trousseau had such great hopes.

Trousseau expresses himself decidedly against the use of either general or local bleeding in this disease. He says (Clinical Lectures, Translation of Cormack, Vol. I., article Puerperal Eclampsia).

sia): "I therefore do not include in the treatment of eclampsia either general or local bleeding, intended to do away with this pretended cause of puerperal convulsions (referring to cerebral congestion), no more than I advise them in epilepsy or in the eclampsia of children. Antispasmodics are, on the contrary, formally indicated, and chloroform inhalations rank first among them."

In a very able paper, in the *Obstetrical Journal of New York* (edited by Noeggerath), Vol. 1872, a medical gentleman of Brooklyn, Dr. Frank Hearn, reports the successful treatment of ten cases of puerperal eclampsia with the Tincture of *Veratrum Viride*. He gives it in doses varying from fifteen drops to a teaspoonful, giving it at first every quarter or half hour, until the effect becomes apparent in the action of the heart, and upon the pulse. He uses no other remedies, either internal or external—relying solely upon the *Veratr. Virid.*

If my memory serves me right, it was in the *Louisville Practitioner* that I saw two cases of puerperal eclampsia reported as treated in the same manner. In both of these cases, this agent was used, because the only available one at hand. The cases were in the country; the physicians were called, and in the emergency used that which was ready in their saddle-bags, the Tincture of *Veratr. Virid.* The indications to the gentlemen in attendance for its use were the almost uncountable pulse, the rapid and powerful action of the heart. The remedy was given in fifteen-drop doses, repeated every half hour, until convulsions ceased. In both cases, a good result was obtained. No other medicaments were used.

In the same volume of the *Obstetrical Journal* above quoted, there is also a report by Dr. Geikie, of Canada, of the successful treatment of this disease by Hydrate of Chloral. I believe it was given in grs. xv doses. An eminent practitioner of this city also informed me that he had had good success with the hydrate of chloral in this affection. Dr. F. Barker, however, does not seem to have great faith in this medicament as a curative agent for this disease. On page 120 of his published *Clinical Lectures*, he says: "I will remark here that I had hoped for great results from the use of chloral hydrate under the circumstances in which I have advised the hypodermic use of morphia; but I have been disappointed. The therapeutic discovery of Liebreich is one of immense value, etc. . . . But my clinical experience has led me to give up its use in puerperal convulsions."

From the foregoing, it will be seen that the authorities upon the subject are divided. They may be classified as follows :

I. The older writers on the subject advocate bleeding, and repeated bleeding, until the convulsions cease.

II. More modern authorities, who advise bleeding also, but not to the extent advocated by older authorities.

III. Those who would not bleed at all.

To arrive, however, at an understanding of these various opinions, and also of the rational treatment of this disease, it is certainly necessary to study its etiology, in how far later discoveries may have enlightened us on this subject; for *sublata causa tollitur effectus*—once the cause understood, we may perhaps succeed in removing it, and necessarily its effects. It is, moreover, certain that unless we have some knowledge of the etiology of this disease, we are not properly prepared to treat it. The anxiety of the family, in so grave a case, where two lives are in jeopardy, will be reflected upon us, and unless we fully understand our position, we will go from one medicament to the other—make use of whatever we have heard or read of as being useful in this disease—without distinction as to its exciting cause, and thus perhaps, by our vacillating course, bring about the death of the patient.

The older authorities, although they have been silent upon the subject of the etiology of puerperal eclampsia, it is evident from their classification and their treatment, leaving out that form called hysterical, regarded it as brought about by cerebral congestion. The general subdivision, such as laid down by Dewees and older English authorities, is the *apoplectic* and the *epileptic* form (I do not consider the hysterical). The cerebral congestion was the cause, and to relieve this, bleeding was the promptest method. We can thus understand the rationale of Dewees' treatment, as related in his paper on Puerperal Convulsions. Case I., already referred to above, was repeatedly bled in the following twenty-four hours. He left a medical student to watch the case, and upon the recurrence of the convulsions, after long intervals, the patient was bled $\frac{3}{4}$ x, this proceeding being repeated three or four times, the return of the convulsion being always indicative of a return of the cerebral congestion. If, therefore, these convulsions are due to cerebral congestion, opium in any of its forms must certainly not be used, for reasons which are self-evident, and antispasmodics will be of no possible advantage.

About 1840, Dr. Rayer called the attention of the medical world

to the fact that albumen was present in the urine of the pregnant female.

In 1843, researches were instituted on this subject in Germany and England, and, reasoning from analogy, the conclusion arrived at, that the predisposing cause of puerperal eclampsia was uræmic poisoning, brought about by albuminous nephritis, or Bright's disease.

Frerich, in his experimental researches, discovered that urea underwent decomposition in the blood into carbonate of ammonia; and Dr. Braun, of Vienna, laid down the proposition that Eclampsia Parturientium is commonly the result of uræmic poisoning, arising from Bright's disease, and produced mostly by carbonate of ammonia, and perhaps also extrative matter of the urine.

Later experiments, made by Prof. Hammond, however, show that urea, as a rule, does not develop into carbonate of ammonia in the blood. The general proposition, however, remains—that puerperal eclampsia is due to uræmic poisoning, resulting from Bright's disease.

It has been, moreover, urged by some advocates of this doctrine that, in those cases where post-mortem examinations failed to discover any lesion in the kidney, such failure was due to the lack of skill on the part of those making the examination.

This was, however, too sweeping an assertion. Post-mortem examinations had been made by observers recognized by all as fully competent, of females dying with puerperal eclampsia, in whose urine albumen had been present, and nothing discovered but perhaps a slight congestion of the kidney (that could as easily be ascribed to the pressure upon the parts during the convulsion), and in other cases the kidney was absolutely healthy.

M. Imbert-Goubeyre, who presented a very able memoir on this subject to the Academy (Paris), lays down the proposition that the presence of albumen in the urine, indicating a change in the fluids, although the kidney is as yet wholly free from disease, is the first stage of Bright's disease.

Cazeaux thoroughly indorses this view in his Midwifery. In the chapter on the subject of puerperal albuminuria, in answering the objections of M. Blot, of La Maternité, who held that only where certain renal alterations were present, could we call it Bright's disease, says: "The granular nephritis is, however, but one of the anatomical manifestations of the disease, and may be altogether wanting, though the albuminuria and other symptoms are pres-

ent." The evidence of Forget, of Strasbourg, is adduced, under whose observation came several cases in which the albuminous urine, and all the evidences of Bright's disease, were present during life, but in which an autopsy revealed no alterations of the kidney.

Cazeaux has thus no classification of the disease. Puerperal eclampsia proper, he only regards as those cases wherein the presence of albumen in the urine, and other symptoms, indicate the presence of Bright's disease, and consequently, as arising therefrom, uræmic poisoning; and in his chapter on the diagnosis of this disease, instructs the student how to differentiate puerperal eclampsia from hysteria, epilepsy, etc.

Dr. Tate, in his paper (already referred to above), has also expressed this view—that uræmic poisoning is the predisposing cause of this disease, and that, as a rule, without this condition, you have no puerperal eclampsia; or, in other words, to symbolize it, uræmia is the powder, and the various exciting causes the match that explodes the powder; and the reverse must therefore also be true—that when you have not the powder, you can not produce the explosion.

This theory has, as a rule, been adopted by many later writers upon the subject.

The treatment recommended by them is the same that was practiced and recommended by Mad. La Chapelle, Smellie, and Denman—bleeding *pleno rivo*.

We must, however, ask ourselves if it be true that eclampsia is the result of uræmic poisoning, what can we accomplish by the free use of the lancet? It is true, that by a free blood-letting, we remove a part of the vitiated fluid; but will not that remaining, vitiated to an equal extent, produce the same effect? For, the cause not being removed, the effect will remain.

Cazeaux, who has discussed this whole subject *in extenso*, in his articles on puerperal albuminuria and puerperal eclampsia, in his chapter on treatment, seems to perceive this difficulty, and to justify his recommendation of the lancet, states that, as a rule, there is more or less cerebral congestion. Others recommend it on the ground that associated with albuminuria there is hydræmia, and to relieve this condition you should bleed. Very true, to accomplish that object, you would, where such a condition is present, bleed once $\frac{3}{4}$ xl or $\frac{3}{4}$ l; but we certainly would not repeatedly bleed till the patient lost one hundred or one hundred and twenty ounces of blood, unless we thought bleeding the cure for the convulsions.

It might be urged, however, that bleeding and rebleeding having been by all regarded as a successful agent in the cure of this disease, we must use it empirically.

Just before the case of eclampsia occurred in my practice, I had read Dr. Tate's paper on this subject, and the above thoughts occurred to me. Taking for granted, however, that this must be the line of treatment, since it has been so generally recommended, on being called to the case, I determined to carry it out faithfully—to bleed *pleno rivo*, and bleed again and again until convulsions ceased. I had the patient bled a first time only $\bar{3}vi$, and there was seeming improvement for two hours; the convulsions recurred, and I bled her $\bar{3}xlv$, and I should no doubt have bled her a third time, had it not happened, as I stated above in the history of the case, that while the blood was flowing freely from a large orifice, she was seized with a convulsion.

If the main cause was cerebral congestion, then why did a seizure occur during the full flow of blood from the arm, after about $\bar{3}xvi$ had been already taken from the body at the time, and when the congestion had been certainly to a great extent relieved? And merely on the empirical plan, if blood-letting could not arrest the convulsions whilst the blood was flowing, how expect a total arrest of the seizure by it?

To this doctrine, however, that uræmia was, as a rule, the great predisposing cause of the eclampsia, grave objections have been raised.

They are as follows:

I. Albumen in the urine is not always evidence, *per se*, of Bright's disease. Bright's disease is the name applied to a disease manifesting itself by certain pathological changes in the kidney, whereby its excretory functions are impaired. The changed condition of the fluid, if produced by other causes than this impairment of the kidney, can not therefore be taken as evidence of the presence of Bright's disease, as Cazeaux and Imbert-Goubeyre insist.

Dr. Kennedy discovered the kidneys in a healthy condition, in a case of dropsy with albuminuria following upon scarlet fever.

M. Blot, in treating upon puerperal albuminuria, has distinctly stated that we may have this condition of the urine in the pregnant female, without any disease of the kidney. The same has been stated by M. Bach, of Strasbourg, in a memoir crowned by the Academy, and this opinion is moreover strongly supported by the

fact of the rapid disappearance of the albumen from the urine after delivery.

II. Many cases of eclampsia have been observed in which neither albumen nor casts were present in the urine; neither did post-mortem examination reveal any changed condition of the kidney, except perhaps, in some cases, a slight congestion.

III. Convulsions do not occur in all cases in which albuminuria is present.

IV. In cases where Bright's disease was present previous to pregnancy, no convulsions have subsequently to it occurred.

In a work published in 1863, Dr. Rosenstein, in treating upon this subject, admits the frequent congestion of the kidney as a result of mechanical pressure in pregnancy, which is manifested by the presence of albumen and casts in the urine, and often actual diminution of the urinary secretion. This congestion, however, he states, is not confined solely to the kidneys, but extends also to the liver, and possibly to the spleen. At the same time, in a majority of the cases, the patient is hydræmic and exhibits dropsical tendencies. He also admits the coincidence, in a certain proportion of cases, of albuminuria with convulsions, during gestation; but, in common with other observers, he finds, in a large majority of cases, that the convulsions occur during or subsequent to parturition. The act of parturition and the subsequent disturbance of the circulation are thus shown to exert great influence in developing eclampsia. Furthermore, he says the convulsions occur just at the time when the albuminuria has been occasioned by excessive local congestion, and at a time when the structural alterations of the kidneys are not such as to bring about uræmic poisoning.

As regards the cerebral congestion as a general previous condition to eclamptic attacks, Trousseau, in his *Clinical Lectures* (Vol. I., Art. *Puerperal Eclampsia*), observed that in eclampsia, no more than in epilepsy, is cerebral congestion a necessary previous condition. The congestion is the result of the convulsion.

Although all authorities upon this subject have laid down nervous influence, dystocia, a full bladder, etc., as exciting causes of convulsions, in a constitution predisposed to it by uræmic poisoning, it must appear from what we have said above, that convulsions may result from any of the causes just mentioned, without necessarily any previous vitiation of the blood by the retention of urea or other extrative matters of the urine in the circulation.

Dr. Barker, in his published lectures, gives a case that forcibly illustrates this opinion—that nervous influence may, *per se*, produce convulsions.

“CASE X. (Page 120, Clinical Lecture, by F. Barker, M.D., etc., New York.) This patient was brought to the hospital on Sunday, September 11, by a policeman, who said that she had passed the night before in the station-house, and that early in the morning she had a fit, with frothing and bleeding at the mouth. A police-surgeon was sent for, who arrived about two hours after the fit; she was conscious, and he advised that she should be sent to Bellevue. On admission, she refused to give her name; was very depressed and taciturn; but little by little she gave the following history, which was all that could be learned:

“Age 19; born in Maine, not far from Bangor. Mother died while she was a baby; father living; has half brothers and sisters. Came to this city by boat, Friday morning. Walked the streets, and tried to get into several hotels, but was refused admission, and bought some cakes from a stand to eat. In the night, sat down on some steps and fell asleep; was awakened in the morning by a policeman, who was very rough. Her gloves, veil, shawl, and money had been stolen while she was asleep. . . . Her dress was dragged, but of good quality, and her manner and language indicated a good education. It was apparent that she was near the end of pregnancy, but she would answer no question on that subject, and seemed much frightened when such inquiries were made. With difficulty, some of her urine was obtained, but was found *entirely free from albumen*. She passed her time in weeping or reading, never speaking to any one, except very reluctantly answering my questions. She complained of nothing, and when asked she always replied that she was well. On Tuesday following, September 13, while sitting by her bed, she suddenly fell upon the floor in a severe convulsion. This could not have lasted more than a minute, for on entering the ward I found her staring wildly around, and she was soon perfectly conscious. As it could not be ascertained when the bowels had been moved, I now gave her hydrarg. chlorid. mit. grs. v, pulv. jalap \mathfrak{D} i, ol. tigllii gtt. i, at 10 p. m. Four hours after, as no effect had been produced, an enema was ordered, but before it could be given she was again seized with convulsions, which recurred every five or ten minutes, she remaining profoundly comatose in the intervals. Before the arrival of Dr. Barker, who was sent for, she had fourteen convulsions, without any interval longer

between any two than ten minutes. A catheter was introduced, and 3xx of urine drawn off, which was *wholly free from albumen*. Pupils contracted to a point; no dilatation on exposure to light. Uterine souffle and sounds of foetal heart plainly heard beating over 180 per minute. As the head was in the pelvic cavity, although not pressing on the perineum, and the cervix was dilated about two and one-half inches in diameter, evidently dilatable, Dr. Barker now introduced the forceps, and delivered, in less than five minutes, a living child, weighing eight and one-half pounds. A few moments after, the placenta was found to have come away with a large though not excessive quantity of clots. The uterus contracted well. For something more than an hour, the breathing was loud and stertorous, after which she went into apparently a profound sleep, without stertor. At 5 A. M., nearly six hours after delivery, she awoke and swallowed nearly a cupful of water. Her pulse during this time was generally 140. The seven successive hours she slept soundly, without stertor, now and then partially awakening for a moment. At 12 M., thirteen hours after delivery, she awoke to full consciousness, asked several questions, and talked more than she previously had since her admission into the building. She also drank a cupful of the hospital beef-soup. The nurse brought her child to her. She took it, looked at it very fixedly for a moment or two, and then threw it from her with such violence that it would have gone upon the floor, had it not been caught; and she immediately went into a convulsion of great severity. This was followed by stertorous coma, in which condition she remained for three hours, and then died.

"Post-mortem examination: At the request of Dr. Barker, the kidneys were submitted for inspection to Professor Alonzo Clark, who pronounced them slightly congested, but in other respects perfectly healthy."

This case well illustrates what we have asserted. There was no evidence of disease of the kidney, but sufficient of great trouble to produce nervous irritation. The patient seems of good family and of good education. She has made a false step; the social consequences arising therefrom alarm her, and she leaves her home to hide her shame. There in that strange city, alone, without friends, the misery of her lot still more harasses her mind; she gives way. Further, after seemingly recovering from her dangerous condition, the nurse brings her child to her. She looks at it steadily for a few moments—only the Lord knows what terrible

thoughts or recollections must have passed through that unfortunate woman's mind in those few moments. It is too much for her still enfeebled condition; convulsions return, and she dies.

You will have probably noticed, in the reading of this case, that at the time when the pains of labor came on, and parturition going forward, the convulsions set in and continued with great severity until she was delivered. You will also have noticed, in the history of the case that I read to you at the outset of this paper, a similar state of things—with the increase in the severity of labor pains, an increase in the frequency, as also in the severity of the convulsions. This has also been observed by others, and it has been asserted that puerperal eclampsia is a neurosis, the result of reflex irritation of the spinal system, the point of departure of which lies in the uterine pains.

A distended bladder may also, *per se*, excite convulsions. A brother practitioner here in the city has had several cases of convulsions in non-pregnant (and chaste) females, in which a largely distended bladder was the cause. On relieving the bladder, and the administration of some chloral hydrate, the convulsions subsided. I also had occasion to see a case of puerperal eclampsia, in which a largely distended bladder was evidently the cause.

A stout young woman, Irish, about 25 years of age, primipara, was seized with convulsions, after delivery. The bladder was examined, and a large quantity of urine drawn off (no dropsy or other evidence of hydræmia in this case). Chloroform was administered by inhalation. Chloral hydrate and tincture of veratr. virid. were administered, and the patient was soon relieved, and made a rapid recovery.

To sum up, therefore—

I. Puerperal eclampsia may result from uræmic poisoning.

Most likely in this manner: The vitiated fluid irritating the cerebro-spinal system and this irritation manifesting itself by convulsions; uræmic poisoning, however, being the direct cause. These cases, it must be evident from what has been said above, are very rare, and when they do occur, the danger is certainly very great, and the prognosis very unfavorable.

II. Those produced by nervous influence or by reflex spinal irritation, whether proceeding from the uterus or the bladder.

The indications for the treatment of this affection are therefore, in the majority of cases, as follows:

I. To remove the exciting cause of the reflex irritation.

II. To quiet the irritation itself.

The first of these indications needs no further explanation here.

To fulfill the second indication (and upon the success which we meet with in our efforts, the life of the patient depends), there are, in my estimation, no better agents than chloroform, tincture veratr. virid., and morphia hypodermically.

The chloroform, to shorten the duration of the spasms, and to throttle it on the least evidence of a return.

The veratr. virid. for its influence upon the spinal system, and for its effects in moderating the rapidity with which the blood circulates, and more especially in the smaller circle, removing thereby, to a great extent, the possibility of cerebral congestion, and the consequence at times resulting therefrom—rupture of a cerebral vessel. We can thus, with this agent, effect more effectually what is sought to be accomplished by blood-letting, and moreover save to our patient the strength that she will sorely need afterwards.

It is impossible for me, in the space of this paper, to enter more fully upon the subject of veratr. virid. and its manner of acting upon the spinal system, but I will refer you to the paper of Dr. Frank Hearn, *Obstetrical Journal*, New York, Vol. 1872, in which the subject is fully discussed.

I must say here that I regret very much not having seen this paper before my case occurred, for I certainly should have given the veratr. a fair trial.

The hypodermic injection of morphia will exert a most beneficial influence in quieting the nervous irritation. An effect that is known to all, and therefore needs no further elucidation.

Chloral hydrate may have a similar effect.

From my reading, however, on this subject, I have arrived at the conclusion that, in those cases where the eclamptic seizures occur subsequent to delivery, hydrate of chloral, either alone or in combination with potass. bromide, or a few drops of the tinct. of veratr. virid., will in a majority of cases be found sufficient. In those cases when it is coincident with parturition, and in which the process of dilatation of the cervix and the expulsive efforts of the uterus tend to keep up the irritation, and thereby the convulsions, and which cases are proportionately more dangerous, more active remedies, such as have been indicated above, will be required.

In the small number of cases wherein we may suspect uræmic poisoning, from the presence of albumen and casts in the urine; from the severity of the prodromic symptoms (which are generally

well marked) that usually accompany uræmic poisoning, and immediately precede the convulsive stage; from the complete coma that soon comes on in the intervals between the convulsive seizures, I should pursue the same course, for the reasons already mentioned, that I believe cerebro-spinal irritation to be the great motor or exciting cause, and that the remedies mentioned give greater promise of success than the lancet so freely used and advised by the older practitioners, for reasons already given in the course of this paper.

I must add, however, that as there is at times associated with albuminuria a hydræmic condition of the system, so extensive as to produce dropsy, in these cases, where such is the condition, a small blood-letting, proportionate to the strength of the patient, from ̄xxxv to ̄xxxx , to lessen the volume of the circulating fluid, might prove advantageous.

REFERENCES.—Cazeaux, Midwifery; Velpeau, Midwifery; Dewees, Midwifery; Obstetrical Journal of New York, Vol. 1872 (Noeggerath); LANCET AND OBSERVER, for May, 1874; Transactions Royal Obstetrical Society (for 1866); Schmidt's Jahrbücher, Vol. 116; Nouveau Dictionnaire de Médecine; Fordyce Barker's Clinical Lectures; Ramsbotham, Midwifery.

Art. 3.—Address to the Graduating Class of the Indiana Medical College, February 26, 1875.

By DOUGAN CLARK, M.D., Professor of Principles and Practice of Medicine.

GENTLEMEN OF THE CLASS OF 1875:—You are to-night admitted into the medical profession as *bona fide* members. The faculty, whose spokesman I have the honor to be, offer you our sincere congratulations on the attainment of that position, as a reward for the expenditure on your part of no inconsiderable amount of time, labor, and money.

I shall proceed at once, without confining myself to any definite theme, to offer a few thoughts on various matters that concern us as physicians, and the community also in their relations to us.

Medicine is either a science or an art. Science is a knowledge of principles and laws. Art is the application of those principles and laws to practical purposes. A science may be studied simply

with a view of increasing the general knowledge of the students, without any intention of turning its teachings to practical account.

All knowledge—I might just as well say all *truth*—is doubtless to be highly prized for its own sake, and independently of its practical results; yet its value is immeasurably heightened when, instead of being truth, stowed away in the mind of its possessor—of no use to any one but himself, and to him only by gratifying a selfish love of knowledge—it becomes truth applied, truth diffused, truth turned into practical channels, and flowing out for the good of mankind. In the one case, science is like gold hoarded in the coffers of a miser—and men may be misers of knowledge just as well as misers of money—shining and fair and pleasing in the eyes of its possessor, but useless to every one else; in the other case, it is like the same gold in active circulation, passing from man to man, paying debts, buying necessities, and benefiting the community generally. Accordingly, there are a few men, and but few, who study medicine as a science merely, with no wish of applying the knowledge thus acquired to the prevention and cure of disease, such application being the only legitimate object of medicine as an art.

These men may be naturalists—they may be philosophers—they may be artists or poets, but they *are not* physicians. I take it for granted that all the members of the class of 1875 are to be practitioners of medicine; that in their view the *science* of medicine, however attractive it may be in itself, is invested with its highest interest, by the light it gives them in the practice of the *art*; that they have not studied anatomy as a painter or sculptor might do, in order that they may more skillfully delineate the human form on canvas or in marble, but that they may know the position and structure of the different organs in health, and thus be enabled more accurately to determine the location and character of any disease they may be called upon to treat; that they have learned physiology not merely for the love of it, as any naturalist might do, but in order to acquaint themselves with the phenomena of healthy function, as a necessary antecedent to the understanding of diseased function; that they have patiently investigated the symptoms of disease, not simply with the view of diagnosing it, but also, and more especially, of *curing* it; that they have devoted weeks and months to the perusal of elaborate treatises on surgery, not merely to gratify an idle or a commendable curiosity, but in order that they might, with clear judgment and skillful hand,

minister to their fellow men, when disease or injury has brought them into suffering or danger; that they have familiarized themselves theoretically and practically with obstetric science, not for the mere pleasure of understanding the wonderful and mysterious processes concerned in the reproduction of the species, but that they may be qualified to render efficient aid, as well as cordial sympathy, to the most lovely and interesting portion of our race, in their hour of trial and of agony; and that they have traversed the dry fields of the *materia medica* not simply as botanists, or mineralogists, or zoologists, or pharmacists, but emphatically as therapeutists. You and I are dependent for our daily bread upon our skill, natural and acquired, in curing disease. In the eyes of our patrons, the *art* of medicine is the important thing, and they will employ those whom they suppose to have most skill in curing their ailments, without any reference to their scientific acquirements.

In point of time, moreover, the art of medicine must have preceded the science. Indeed, this art is not altogether unknown to the inferior animals. I have heard that, in South America, birds, being bitten by venomous serpents, will fly off to certain plants, and devour them as an antidote to the poison, and then return again to the contest. Dogs lick their own sores as they licked those of Lazarus; and both dogs and cats sometimes relieve themselves of the discomfort of an overloaded stomach, by eating certain kinds of grass. In so doing, they are employing medical treatment, just as decidedly as the physician would do, who, under similar circumstances, should administer a dose of ipecacuanha. The savage tribes have their medicine men, with their own notions of disease and their own *materia medica*, which doubtless is by no means devoid of potency. Men were sick long before they knew anything about the anatomy of their own bodies, or the nature of disease; and when attacked by sickness, they would naturally look about for agents which might relieve their sufferings. Thus gradually, by repeated trials, it would be ascertained that certain substances possessed a greater or less controlling power over certain groups of symptoms; and so an *art* of medicine would spring up—an art wholly empirical, no doubt, but still not without value—and individuals in every country would devote themselves to the study and practice of this art.

In this manner, there would come to be, at an early period in the

history of every nation, a class of persons applying themselves to the treatment of the sick—a profession of medicine, in short.

Such a profession existed in Egypt at least seventeen centuries before Christ, for we read that “Joseph commanded his servants, the physicians, to embalm his father; and the physicians embalmed Israel.” And we have to confess that, whatever may have been their success in therapeutics, so far as embalming is concerned, the skill of the Egyptian physicians has never been surpassed; since bodies embalmed by them at those remote periods, are still in an excellent state of preservation. And while speaking of Biblical medicine, I may remark that those persons who, *when in health*, are very much in the habit of making satirical speeches about the doctors—using their wit to show, in many ways, how intimate the connection is between the calling of the physician and that of the undertaker—will find themselves anticipated and excelled by the author of the Book of Chronicles.

I would not for a moment insinuate that the sacred writer was intending to perpetrate a joke at the expense of our profession, but certainly the following passage sounds wonderfully like it: “And Asa, in the thirty and ninth year of his reign, was diseased in his feet, until his disease was exceeding great: yet in his disease he sought not to the Lord but to the physicians. *And Asa slept with his fathers.*”

But it was not only in Egypt that the art of medicine was cultivated at a very early period. The Greek poets, and Homer among them, make frequent references to the skill of the medical men of their times in curing diseases and healing wounds. Hippocrates, the father of medicine, who wrote extended treatises on the subject—many of which are still extant—flourished about 400 years before Christ. With him, medicine as a science may be said to have its origin. As he was totally ignorant of anatomy and physiology, there are many of his notions which are crude and incorrect, when brought into comparison with the more enlarged discoveries of modern times, yet he investigated principles and deduced from them general precepts of greater or less value, and hence taught both the science and the art. Six centuries later, or in the second century of our era, Galen arose and stamped his influence upon the medical mind of Europe for a period of 1,300 years. Since the revival of letters, and the wondrous advancement in knowledge of all kinds, consequent upon that revival, as well as upon the adoption of the inductive system of philosophy, medicine, with all kindred sciences,

has made rapid progress. And we would not wish, by anything we have said, to justify the inference that those who devote themselves to science only, leaving to others its practical applications are therefore less useful to their race. Science throws light upon it, directs it, suggests many useful improvements, corrects many blunders and errors. Nathaniel Bowditch, the mathematician, though he probably never commanded a vessel, was yet able to compose a treatise on navigation, which might be a complete guide to the mariner in his way across the trackless deep, enabling him at any time to ascertain his latitude and longitude, to steer his course aright, and to reach in safety his desired haven. So in the different branches of medicine, earnest and laborious investigators are at work; and, while they themselves may have no time to visit patients and take charge of their illnesses, yet the fruit of their labors is reaped as an ample harvest by the profession at large. John Hunter asserted that it takes twenty years of special study to make a good anatomist, and that is one-third of an ordinary lifetime. Many men devote their whole lives to study and experiment in physiology; others, with similar assiduity, to chemistry. Some with knife and scalpel are ever in the dead-house, studying morbid anatomy and pathology. A few are constantly walking the wards of hospitals, observing symptoms, arranging them into groups, carefully inquiring into their significance, and the indications they afford. Others are investigating the *modus operandi* and effects of remedies—a field in which there is yet much virgin soil which will amply repay the diligent cultivator. Others are gathering rich and abundant stores of knowledge from the revelations of the microscope—an instrument which is already filling a very important place as an aid in the diagnosis and consequently in the treatment of disease. Now, our profession being a liberal one, does not tolerate any monopoly of knowledge or any monopoly of invention. Our code of ethics, which, although not perfect in all its provisions, is yet, upon the whole, a monument of the high-toned and honorable and proper feeling of our profession toward each other and toward all men, forbids a physician “to hold a patent for any surgical instrument or machine, or to dispense a secret nostrum, whether it be the composition or exclusive property of himself or of others.” And the reason given for this prohibition is certainly a good one, viz: “If such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraud-

ulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them." Thus the liberality of our profession requires that the discoveries made by earnest and diligent investigators, in the various fields I have mentioned, should be published to the medical world, and become the common property of physicians everywhere. It is honor enough for the patient laborer in the field of medical science, that the truths he discovers are appreciated by his brethren and applied to the benefit of mankind. And very incorrect are the opinions of those who do not give our profession any credit for valuable discoveries, nor for any true advancement. There are such persons in every community, and the idea, I believe, is kept up and promulgated by irregular practitioners, that the medical profession proper makes no progress; that we still practice medicine very much on the same principles and with the same remedies that Hippocrates employed, and that only outside of regular medicine do you find true liberality, true reform, and true progress. Let us glance for a moment at some of the discoveries and improvements in medicine, all belonging to modern times, but some more and others less recent. And, first, the great discovery of Harvey—the circulation of the blood. For thousands of years men had lived, generation after generation, in total ignorance of that beautiful mechanism of heart, arteries, veins, and capillaries by which this wondrous process is carried on—a process which is now familiar to every school-boy. Anatomy had been cultivated, as indeed it still continues to be, under very great difficulties; and of physiology, medical men were almost as ignorant as the unprofessional world—and this for a period of many centuries. And when Harvey worked out the problem of the circulation, showing how the venous blood, carbonized and deoxidized by contact with the living tissues, is poured by the two great *venæ cavæ* into the right auricle, thence to the right ventricle, from which its return is prevented by a most efficient valvular arrangement, and so is forced into the pulmonary arteries, distributed to the air-cells of the lungs, gathered up as arterial blood by the pulmonary veins, driven to the left auricle and ventricle in succession, thence to the aorta, the arterial system, the capillary system, the venous system, and again to the heart, he found no physician, it is said, over forty years of age, who did not reject the doctrine. Yet it triumphed, because it was true, and can any one be so unreasonable as to imagine that this grand discovery

did not cause a wonderful revolution in anatomy, and in physiology, and that its influence was not felt even in therapeutics?

Again, consider the incalculable benefit conferred upon mankind by the discovery of vaccination. I think it is Robinson, the historian, who tells us that in the early period of Spanish discovery in America, a single sailor was put ashore on the Mexican coast sick with small-pox, and from that one center of contagion the disease spread so rapidly that within five years a million persons had perished by the fell malady. Yet, to a very great extent, small-pox has been shorn of its terrors by vaccination. It is safe to say that many millions of lives have been saved by this simple and generally harmless operation. It is true, there have recently been in existence, both among the professional and the unprofessional public, some doubts of the efficiency of vaccination as a preventive of small-pox, and some fears of propagating other diseases by spurious vaccination. If proper care be observed, these doubts and fears are probably altogether groundless. From earnest and repeated investigations, made by conscientious physicians, in small-pox hospitals and elsewhere, we are justified in concluding that not more than one person in five, if properly vaccinated, will contract small-pox on exposure; and that among those contracting it after proper vaccination, the mortality is not more than one-fifth as great as among those not thus protected. In other words, the mortality is diminished at least twenty-five times by this wonderful discovery. And I may be permitted to express my own belief that if governments would take the proper legal steps in this matter—securing for all their subjects, by compulsion if necessary, efficient vaccination and re-vaccination—there is strong probability that, in the course of a few generations, that most loathsome of all diseases, the variola, might be exterminated from the earth. And does the world owe nothing to the medical profession for a discovery like this?

Another thing in which there has been a vast advancement in recent times, though much still remains to be done, is a knowledge of the *modus operandi* of medicines. For only about one hundred years has the doctrine of the absorption and dissemination of medicines through the circulation been confidently maintained; and we are informed that, so late as the beginning of the present century, a thesis was published in Philadelphia, containing an account of the proofs then existing that medicines are absorbed into the system. This doctrine is now, however, a fundamental one in therapeutics.

The proof that substances used medicinally enter the circulation

is derived from direct experiments upon animals, in which articles administered to them have been afterward detected in the blood, in the tissues, and in the secretions. Pereira gives a list of forty substances, such as metals, metalloids, salts, and coloring matters, which, after being swallowed, have been found by chemical tests in the blood.

Before the discovery of the absorption and circulation of medicines, these substances were supposed to act solely by nervous sympathy, entering the stomach, affecting distant organs through the nervous system, and passing out of the body with the residuary matter. Doubtless, some remedies do act in this way; but the great majority are known to enter the blood, and some of them are subjected, whilst in that fluid, to changes which greatly affect their therapeutic powers. Iron, for instance, enters into direct combination with some of the principles of the blood, supplying a wanting material, and really acting as a blood-nutrient. Other medicines act in the blood by neutralizing or counteracting morbid agencies or morbid processes in that fluid—as, for instance, alkalies in acute rheumatism, by combining with the superabundant lactic acid.

Here opens before us a very wide field for investigation; but the one fact of the absorption of medicines, now universally recognized, is a very great advance on all former knowledge in relation to the subject, and must be fruitful sooner or later in therapeutic results.

We think none will deny that there has been a great and beneficial change in the practice of surgery since the day when operations were left in the hands of barbers, and he who shaved your face would also amputate your limb, and knowing nothing about the ligation of arteries, would control the hemorrhage by searing the bleeding surface with a red-hot iron.

The practice in vogue in the dark ages, of carefully applying ointments and dressings to the sword that inflicted the wound, while the wound itself was entirely neglected, was probably, for *those times*, not a bad one, since, in that way, the processes of nature, by which the healing was to be accomplished, were left to go on without injurious interference.

Let us now come down to our own times, and inquire what has been accomplished in our science and art during the lifetime of many now present. First, I will mention the discovery of anaesthesia as a means of preventing pain during surgical operations. The inhalation of ether for this purpose dates back to 1846, though nitrous oxide had been employed a little earlier for the painless ex-

traction of a tooth, by Dr. Horace Wells, of Connecticut, who is probably the true discoverer of anæsthesia. A year or two later, Prof. Simpson, of Edinburgh, introduced chloroform to the profession as an anæsthetic, and since that time it has been more employed than all other agents. Although the rendering of a patient insensible by chloroform is not entirely devoid of danger, as evinced by the fact that several hundred deaths have occurred from its administration, yet, upon the whole, the annulling of pain during severe operations has been and is an invaluable boon to mankind.

Neither the surgeon nor the obstetrician would be willing for a moment to dismiss anæsthetics from his armamentarium. Independently of the agony of the sufferer, pain is depressing to the powers of life, and one very effective cause of nervous shock, which is too often fatal after the use of the knife. The mortality from dangerous operations has been undoubtedly diminished since the introduction of chloroform, notwithstanding the perils of that anæsthetic. The pain, in other words, would have killed vastly more patients than the chloroform has killed. When, therefore, by injury or disease, a patient is necessitated to undergo an operation which was formerly attended with inexpressible suffering, and when he takes his seat upon the operating-chair, or is placed upon the table, and inhaling the anæsthetic, loses his consciousness—laughs, sings, talks, or slumbers, while the knife is making its way through his quivering but insensible flesh, or the saw separates his bones—it should be remembered that to the medical profession he owes this immunity from suffering. And when woman is seized with that nameless-agony, which is so frequently mentioned in the Bible as the very type of intolerable suffering, and when, by the soothing influence of chloroform, her pain is all neutralized, while still the forces concerned in parturition are as effective as ever, and her joy “because a man is born into the world” is not clouded by the “sorrow because her hour has come,” let her also remember and acknowledge that for all this happyfying experience she is under obligation to the profession of medicine.

Again, thirty years ago the lancet was used in perhaps nine cases out of every ten visited by the physician. To an equal proportion some preparation of mercury was administered. Now, I apprehend that the ratio is reversed, and that physicians bleed and mercurialize no more than one in ten of their patients. Most of them, indeed, allow their blood-letting instruments to remain at home altogether, and grow rusty in total neglect. In almost all

inflammations, in many fevers, in hemorrhages, in apoplexy, in convulsions, in utero-gestation, in all severe injuries, it was thought by the authorities of our profession, a quarter of a century ago, that venesection was indispensable. Doctors were really blood-thirsty. The human system will bear very considerable losses of blood with impunity—as is evinced in post-partum and other hemorrhages—and I do not presume to criticise with any severity the proceedings of our immediate fathers in the profession. Very few persons were actually bled to death by physicians, even in the days when phlebotomy was most prevalent, yet it can scarcely be otherwise than true that more harm than good resulted from this indiscriminate depletion. The following sentence was taken from the diary of a pious physician, if I remember rightly, in France: “Such a one has been very sick with a fever; he has been bled twenty-eight times, and is now quite well, *for which I praise God.*” “Certainly,” says the translator, “*there was reason.*” A patient in Philadelphia was very ill of pneumonia; he was subjected to venesection largely and repeatedly, and after several days the physician reported that he was cured of pneumonia, but was dead of debility. Whether death by debility is easier and better than death by pneumonia, I am not prepared to say. In our day, as already intimated, the lancet has fallen into almost total disuse. There are many who think that the type of disease has changed in exact proportion with this great change in the professional mind, and that most affections are far less sthenic than formerly. Hence they argue that both our fathers were right in practicing, and we in abstaining from, this large abstraction of blood. I shall not, on this occasion, enter into the discussion of a question so strictly professional as this, but merely state that I think the change of practice in this respect is a sign of progress—a cheering proof that our profession is not so wedded to any notion or proceeding, however authoritative, as to adhere to it when the light of advancing science determines it to be erroneous—that they are, like all humble disciples of Truth, simply following where she leads them, and willing even to acknowledge that they have sometimes been mistaken, which is only equivalent to saying that they are growing wiser. It may well be questioned whether, at the present time, the reaction against blood-letting is not too strong, and whether we are not now allowing our patients to suffer from the too *infrequent*, as they formerly suffered from the too frequent and excessive, employment of the lancet. This is a matter, I think, which may properly be allowed to regu-

late itself. The true and happy medium, I am confident, will be discovered and acted upon by the candid and intelligent minds of the profession, who have no theories to maintain or overthrow, who study each case of disease they are called upon to treat as a new problem which they must solve, and who accept no hypothesis or speculation, from whatsoever source, without subjecting it themselves, or knowing that it has been subjected, to the crucible of chemical experience.

As regards mercury, there can be no doubt, I think, that the generation of physicians immediately preceding our own employed it in excessive quantities, and sometimes to the injury of their patients. In many ordinary diseases, such as pneumonia, pleurisy, and malarious fevers, it was rather the rule than the exception to bring about profuse salivation. Sometimes this was carried so far—not, we may hope, by design—as to produce sloughing of the soft parts on the inside of the cheeks, falling out of the teeth, and even, in rare instances, necrosis of the jaw-bones. All this was calculated to inspire in the public mind a horror of the drug; and, as might have been expected, a prejudice against it has been engendered, so strong that many patients now will steadfastly resist its administration, even in cases where, in judicious hands, it might be of immense benefit to them. For mercury, like alcohol, has undoubtedly its legitimate use as well as its abuse, and every one of you has met with cases in which it could not be effectually substituted by any other drug in the pharmacopœia. In spite of the excessive and injudicious use of mercurial preparations in former years, the deaths resulting directly from these preparations were extremely few; so that if metallic mercury or its protochloride be a poison at all, it certainly ranks very low in the scale. Of an equal number of persons who have taken calomel and lobelia respectively, a much greater proportion have perished from the latter drug than the former. If one has slain its thousands, figuratively speaking, the other has slain its ten thousands. And yet, in hundreds of homes in Indiana, lobelia is kept as a domestic remedy, and administered, without fear and without the advice of a physician, by good mothers to their sick children; while the same mothers would dread to administer a dose of calomel, even by a physician's direction, as they would dread a serpent's bite. The hostility against mercurial remedies, caused in part at least by their injudicious use in former years, extended in the public mind to mineral medicines generally, and it is chiefly on this prejudice,

wide-spread and inveterate in its character, that one or two of the more popular schools of irregular medicine have been founded. It is not my purpose at all to discuss the so-called systems of medicine, nor to interfere with any man's right to employ whomsoever he will as his physician, but I would just remark, for the information of candid laymen, that certain theories in medicine which claim to be liberal reforms are really based upon an exclusive rejection of some of the most important articles of the *materia medica*, and therefore neither liberal nor reformatory; while, if any one is afraid of *mineral poisons*, he ought not to be ignorant that most of our violent and deadly poisons—strychnia, aconite, atropia, morphia, digitalin, Indian hemp, hydrocyanic acid, and many others—are vegetable productions. In shunning Scylla, let such a one be very careful of Charybdis.

More than half a century has now elapsed since Laennec was making his grand discoveries in physical diagnosis, by the use of the stethoscope, and opening a new world of light to the profession in the study of thoracic diseases. Like almost every new discovery, auscultation and percussion were at first derided and ridiculed. You remember that in those days the stethoscope was defined by its opponents as a tube with a patient at one end and a fool at the other. But truth prevailed, and now there is no well-educated physician who would dare ignore the invaluable aid obtained by the ear, with or without the stethoscope, in the diagnosis of affections within the chest. Instrumental diagnosis, as well as instrumental therapeutics, has become a study in itself. How easily and simply the surgeon determines the character and contents of a tumor, and hence the propriety or impropriety of an operation, by the use of the *exploring-needle*. Then, besides the *microscope* and *stethoscope* already mentioned, we have the *ophthalmoscope*, by which not only diseases of the eye, but those of the brain may often be detected; the *otoscope*, for examining the condition of the ear; the *laryngoscope*, for peeping into the larynx; the *endoscope*, for the urethra or intestinal tube; the *speculum*, with its many varieties, which, although not unknown to the ancients, has been so improved as to open a new era in the treatment of gynecological diseases; the *aspirateur*, which is a French instrument, whose description is that it works on the principle of a pump and costs sixty dollars, and which is of incalculable value in ascertaining and safely evacuating the contents of deeply seated tumors; the *thermometer*, whose important revelations are just beginning to be appreciated

by the profession; and the *sphygmograph*, an instrument which determines with more accuracy than the best-educated finger can possibly do, the character and variations of the pulse.

All these instruments have either been invented or perfected during the lifetime of some who hear me, and probably you will call to mind several others which at the moment of writing escape my memory. If I should enter upon the subject of instrumental therapeutics and mention all the improved surgical instruments and appliances which have been brought into use during the present generation, together with those of the obstetrician, the gynæcologist, the medical chemist, the oculist, and the aurist, I should weary your patience to no purpose. Their name is legion. But these things are mentioned to demonstrate that the profession of medicine is not an antiquated relic of the barbarous ages—not a fossilized body of men, either not moving at all or moving ever in the beaten track of their ancestors—but an active, enterprising, progressive, energetic brotherhood, receiving from our predecessors with due reverence all that is good and true, and applying it faithfully for the benefit of our patrons, but each generation adding also its own contributions to the general store of knowledge, and transmitting the means and appliances for the mitigation and cure of disease, increased in number and efficiency, to those who succeed them.

And if the charge of narrow-mindedness and illiberality belongs to any class or classes of men styling themselves physicians, it is surely not to us. We claim and exercise the privilege of using everything known to man that enlightened experience has demonstrated to be useful in human ailments. We draw our resources from the animal, the vegetable, and the mineral kingdoms; we force into service the imponderable agents, light, heat, electricity, magnetism; we do not ignore mental influences, nor moral influences, nor spiritual influences. Our platform is as broad as creation. If one so-called school of medicine chooses to exclude all minerals from their list of remedies, it is they, not we, who are narrow-minded. If another school depends solely upon water in numerous modes of application for the cure of all diseases, we are not to be esteemed illiberal, if, while acknowledging the virtues of the water-treatment in its proper place, we employ not only water, but hundreds of other remedies also when they are indicated. The mention of hydropathy brings to mind an anecdote of Thomas Hood. About the time that Priessnitz was making such a stir with his water-cure upon the continent of Europe, Hood remarked that he

was one day noticing the maneuvers of a duck in a pond. First she took a foot-bath, then a sitz-bath, and then a head-bath, and then a plunge-bath. Afterward she shook her wings and raised her head, and "I expected to hear her shout 'Priessnitz forever!' But she only said *quack, quack, quack!*" If another sect plants itself upon the unproven and unprovable dogma that "*like cures like*," and assumes that the virtues of a medicine are indefinitely increased by indefinite dilution, we only say that it is *their* foundation, not *ours*, that is narrow; whilst the best recommendation we can give their practice is the admission that their infinitesimal doses, if honestly adhered to, are likely to do *very little harm*. Believe me, my candid unprofessional hearers, all true progress in medicine is *inside* of the profession and not *outside* of it! We are ready to admit that there are many problems in our science and art which remain unsolved and which are extremely difficult of solution. To form a just appreciation of the effects of remedial agents is a task by no means easy. These effects are so modified by varieties of constitution, difference of age, sex, and temperament, diathesis, idiosyncrasy, and climate, as well as adulteration or defective character of the drugs employed, that we are constantly liable to be led astray. Even of those substances which most certainly cure disease, it may be said that we know little of their action, not only on the diseased, but on the healthy body. In a large majority of our ordinary diseases, the tendency is to health, and whether the physician administer calomel and quinine, lobelia, bread pills, cold water, or sugar of milk, the patient will recover, and the medicine very probably get the credit. No class of men are so likely to be deceived by the logical fallacy of "*post hoc, ergo propter hoc*," as physicians, unless it be their patients. Yet through all these difficulties, progress in therapeutics has been steady ever since the revival of letters, and in our own time certainly not slow. Compare the treatment formerly employed in acute diseases, intermittent fever—which, before the discovery of cinchona, in its tertian form, was almost as much dreaded by physicians as phthisis pulmonalis—the prophylaxis of small-pox, already alluded to, and many other affections with that of our day, and a marked difference in favor of modern therapeutics will at once be apparent. Under the improved treatment by cod-liver oil, tonics, outdoor exercise, and a judicious change of climate, the mortality of consumption itself has been diminished at least eight per cent. in the last quarter of a century. Though the majority of

those affected with tuberculosis of the lungs still die, yet it is no longer to be considered an *incurable* disease.

We may well hope, therefore, that progression is to continue, and that "*the primitive fact*," which shall yet perhaps render therapeutics as exact a science as natural philosophy is rendered by the law of gravitation, and chemistry by the law of affinity, may be discovered at no distant day. In the meantime we labor and wait.

The knowledge of medicine includes that of many subordinate sciences. Besides chemistry, botany, and pharmacy, all of which are very desirable, if not indispensable, for the accomplished physician, he will particularly need to become familiar with the more practical departments of surgery, practice, obstetrics, gynecology, and medical jurisprudence. Medicine proper may be considered under the three grand divisions of physiology, pathology, and therapeutics. The physiologist investigates the functions of the various organs in health, the pathologist considers the same functions in disease, and the therapist endeavors to restore them from one condition to the other. Now as physiology can not be understood without a knowledge of anatomy, and as pathology involves an intimate acquaintance with disease, and therapeutics is to a great extent dependent upon a familiarity with *materia medica*, we see how extensive and varied is the knowledge requisite to constitute a true physician, and how justly ours may be classed with the learned professions.

Medical literature is a thing of which our profession may be justly proud. So many books in the different departments of our science are annually pouring from the press, that no man could read them all if he had nothing else to do; and although doubtless some of these are not very valuable, yet, upon the whole, they are a monument of the genius, the industry, and the honesty of their authors. We venture to say that in no profession is more talent exhibited in the production of useful, instructive, standard literature than in our own. Then there are enough medical journals published in the civilized world to make a catalogue of very respectable dimensions. And they are not only published, but read; posting their readers in everything new and important in the medical world. And all this knowledge gained from the patient observation of hundreds of men in both hemispheres, is gathered up and applied by the members of the profession in different localities for the benefit of their patrons. Then we have state, county, and city medical societies, where physicians meet at stated periods to discuss

medical questions, to ask and receive information—to make the knowledge of each available to all—and *you, my professional hearers, reap the benefit*. If one has passed through an epidemic of spinal fever, and another of typhoid fever, and another of malignant erysipelas, and another of cholera, they communicate to their brethren the plan of treatment which they found most beneficial—compare notes, reason together; and so any useful information gained by one becomes the common property of all. Is not this better, is it not more liberal and more honest, than for each to work only for himself—publishing extravagant accounts of his cures, issuing flaming handbills setting forth the wonders he can perform, and evidently showing more eagerness to get money out of the public, than honesty of purpose to cure their sicknesses?

Let me ask you, in all sincerity, not to distrust the medical profession. It is better for all parties that there should be such mutual confidence between physicians and their patrons that matters of health are just quietly left in their hands. They should be consulted and their advice acted upon as regards all sanitary affairs in the community, as well as in families, and by families in small ailments as well as grave ones. If your clock or watch is out of order, you do not tamper with it yourself, but go to one who understands its mechanism and its derangements, because he has made them an object of special study. And will you tamper with the far more delicate and complicated mechanism of the human frame without understanding it? Will you pour in patent medicines, nostrums, domestic preparations, and thus run imminent risk of increasing the derangement you are trying to remedy, or will you refer the case to one who has made the human body and its derangements an object of special study?

He who has made the human body subject to so many maladies, has also implanted healing virtue in many articles which are to be discovered by close study and rational experience; and it is an irrefragable truth that legitimate medicine practiced by high-minded and intelligent men, is so decided a blessing that the world could not afford to dispense with it—while drugs properly administered are productive of so much good, that it would not be better for men any more than for the fish that all the medicine should be cast into the sea as suggested by Dr. Holmes.

We ask you, then, simply to be not faithless but believing. We want to do you good, and although we do not affect an indifference to selfish and mercenary motives, yet we do claim, in addition to

these, to be actuated by higher and better considerations also—a cordial sympathy namely with suffering humanity, and an earnest purpose to relieve and aid the afflicted.

We believe our mission to be a high one—nay, almost a holy one; for Jesus did not disdain to heal the bodies as well as the souls of those who came to Him. A Christian physician, like his Master, goes about doing good.

Now, please do not underrate and undervalue us—please do not call us by inappropriate names—do not designate us *old school* physicians. There is no school so new as that of young, active, progressive medicine. Do not call us *mineral doctors*. None have a higher appreciation of the rich medicinal treasures of the vegetable kingdom than ourselves. Do not call us *allopathic physicians*. It is a *nickname*. Strange as it may appear, I assure you, that I never saw an allopathic physician in my life. It is true, by a judicious administration of remedies, we are sometimes able to supersede a morbid condition and substitute it by another condition tending to health; but I know of *no* one who practices medicine exclusively or chiefly on the plan of setting up one disease to cure another. *We are simply physicians—we are medical men—we are one of the learned professions—we are doctors without any adjective or any handle.*

Gentlemen of the class of 1875, I bid you Godspeed! The profession you and I have chosen, “is a noble profession, and worthy the devotion of a lifetime.” You will have difficulties and discouragements to contend with, no doubt; but you will have corresponding enjoyments and rewards. You will be sometimes unjustly censured for results which no human skill could avert; but sometimes again you will get credit for cures which you are innocent of performing. In the way of a general estimate, you will have nothing to complain of. Abide faithfully in your calling, and remember that though art is very long, life is very short. Be it yours to work while it is day. Be it yours to cultivate the habit of close, accurate observation, and severe, precise study, which is necessary to the highest success in your calling. Be it yours to be centers of sanitary influence in your respective neighborhoods, remembering that if it is blessed to cure disease, it is thrice blessed to prevent it. Be it yours to carry in your bosoms, at all times, that quiet peace which accompanies the consciousness of a life well spent and duty well performed. Be it yours, as you grow more familiar with suffering and death, to learn, in the words of Dr. Abercrombie, “to appreciate those truths which have power to heal

the broken heart and cheer the bed of death with the prospect of immortality." Be it yours, when the end comes, to hear the welcome summons, *Come up higher!*

Art. 4.—Reunion of Alumni Association of Miami Medical College, March 2, 1875.

The President, Wm. B. Davis, M.D., Prof. Materia Medica and Therapeutics, Cincinnati, spoke as follows:

GENTLEMEN OF THE ALUMNI OF THE MIAMI MEDICAL COLLEGE:—We have met this evening to join in the festivities of our first reunion. Not quite a year has elapsed since we completed our organization, and resolved to have three quarterly meetings and a reunion each year. Our quarterly meetings have been well attended by the alumni living within a radius of one hundred miles of Cincinnati. These meetings consisted of the reading and discussion of original papers and social interchange of courtesies. I am happy to say that no essayist has failed to discharge the duty assigned him, and at some of our meetings, particularly the last one, there were more papers than could be read. This indicates industry, zeal, and study. It indicates that our organization is for the purpose of work and professional advancement. We meet, grasp each other by the hand, compare cases, report results, bid each other Godspeed, and return to our respective fields better men and better physicians for our brief meeting.

Those living in distant States may not be able to attend our quarterly meetings, but many can and will attend our annual reunions. Let us make these reunions our breathing spells, where the trials, difficulties, and triumphs of our professional labors shall be recounted, and where, by a generous spirit of emulation, we shall be urged to higher acquisitions and nobler aims.

I see no reason why this association shall not become a compact and powerful organization, where great professional questions shall be discussed, methods of work devised, and plans executed. Already we have over five hundred alumni filling honorable positions in every State between the Atlantic and Pacific coasts. If we can interest these five hundred men in our association, and determine

each year to individually and unitedly devote our energies throughout the year for the accomplishment of some specific professional measure to be determined on at our annual reunion, we could exert great influence in molding and directing public sentiment. To a body of five hundred zealous, devoted men, working for a great and good object, nothing is impossible. In view of this, I desire this evening to submit two important propositions for your consideration, with a view of provoking thought, discussion, and action :

1. *The demands of the age are for a higher culture in our profession.*

2. *In order to meet this demand, our medical colleges must elevate their standards for admission to and graduation from them.*

Our excellent system of common schools has placed the groundwork of a good education within the reach of all. High schools and colleges are within speaking distance of each other all over our land. All departments of life are teeming with skilled workmen. It is not alone in the ministry, law, and the press, but in the commercial, agricultural, and mechanical departments, you find vigorous and disciplined minds. The medical profession has always ranked as one of the learned professions, but I have thought, while we have some of the best thinkers and writers of the age, that the mass of our profession has not kept pace with this grand tidal-wave of culture. If we would sustain the dignity and honor which have been accorded the profession in the past, we must keep to the front. We must have well-educated physicians if we would preserve the weight and influence of our profession in the midst of a cultivated community. The professional and social standing of a physician will always be enhanced by the reputation he has justly acquired for being a man of learning.

Very few can ever hope to obtain wealth by the practice of medicine, but it is within the power of all to obtain that which wealth alone can not give—viz., honor, position, and culture. All positions in life worth having cost protracted and persistent efforts. From nothing comes nothing. Success treads only the path which persistent and exhaustive labor has made.

When nearly fourscore years old, that eminent surgeon, R. D. Mussey, was asked to what he mainly attributed his success in life. His response was, "Daily study. If a day passed without my reading the current medical literature, I felt that I was a day behind my profession." If this great truth could be stamped in the

minds of medical men as they enter upon their life work—if *patience*, *industry*, and *study* were chosen as their watchwords, success and honor would more often be theirs. Culture demands our best efforts. God has decreed that only by the sweat of the brow shall we obtain bread. Labor is the gateway to all success. Nothing great or good was ever accomplished without great labor and great sacrifice. I wish I could crush out that *ignis fatuus* which besets young men during their sophomore periods, and which so often leads them into the mire of sloth and ignorance, and strands them on the barren beach of mediocrity, viz: That greatness is an inspiration, a sudden efflorescence, which, without any effort on their part, will crown them with glory and honor. Great results only attend great labor. A rival once jeered at Euripides, because he had taken three days to compose five lines, while he had dashed off five hundred in the same time. "Yes," was the just retort, "but your five hundred lines in three days will be dead and forgotten, while my five lines will live forever." •

Hazlett spent so many weary years before he could give proper expression to his thoughts, that he almost despaired of ever succeeding as an author.

Tom Moore regarded ten lines a day good work, and he would keep a little poem for weeks, waiting for a single word.

The easy, polished Dickens, speaking of his own writings, says: "My own invention or imagination, such as it is, would never have served me as it has, but for the habit of commonplace, humble, patient, daily-toiling, drudging attention."

Buffon said that genius was nothing but patience, and style was slow of pen.

Turner, the great painter, when asked by a lady what his secret was, replied: "I have no secret, Madame, but hard work."

Two years ago I was in the studio of Joel Hart, in Florence. Since Hiram Powers' death, he is the oldest American sculptor in Italy. As I looked upon his grand master-piece, which he was just completing, and as its wonderful symmetry and beauty filled my soul, I said to the venerable artist, "How long were you in molding that figure?" He thoughtfully and slowly responded, "Ten years;" then quickly correcting himself, said, "or, rather, all my life, for all the work of my life has been but a preparation for this work."

Lyman Beecher tersely expressed the same thought after preaching one of his most powerful sermons. A friend asked him how

long it took him to prepare that sermon. He replied, "about forty years, sir." Labor is the only road to success. Every effort imparts power for the succeeding effort. We do not spring Minerva-like from the head of Jupiter to the summit of human knowledge, but as a child slowly but surely grows into manhood if he obeys the conditions and laws of growth, so may we, by a proper use of our mental powers, grow into the full and rounded proportions of intellectual manhood.

As a rule, where you find an inferior physician, you will find a man whose early education has been neglected. An individual who enters upon the study of medicine without the drill and discipline of a collegiate education, or who has not accustomed himself to methods of study as severe as the college curriculum, scarcely ever masters the principles of his profession, and labors to great disadvantage the remainder of his days. Unless early studies develop a taste for mental pleasure, indifference to them may be expected to continue throughout life. And yet many students enter upon the study of medicine without even a good common-school education, and some who can not speak or write their mother tongue correctly.

An enterprising youth followed the advice of Greeley and went West. Prospering in business, he wrote for his paternal ancestor to follow his example, saying, "Come out, father, and we will make you a Judge or a Congressman. They elect all sorts of fellers to office out here." When I see the hordes of unlettered men who are overrunning our profession, I can not help thinking "all sorts of fellers" are made doctors. An ignoramus, with an M.D. as an appendage to his name, should be an impossibility. That there are such anomalies is an insult and an opprobrium to the profession. Who is responsible for them? Partly the profession itself, who encourage untutored men to enter upon the study of medicine, and largely the colleges, who receive and graduate them; and the multiplicity of medical colleges, low fees, and the false notion that numbers, not scholarship, are the criterions of success.

I am reminded of the old fable of the wolf with a numerous progeny, who derided a lion for giving birth to but one whelp. "It is true," she responded, "I bring forth but one, but that one is a lion." Let the command go up to the colleges from an outraged profession, for *lions*, and let their response be lions, even though few in number.

Twenty-eight years ago, the brilliant Prof. J. P. Harrison stated

in a public address, that the profession "should unhesitatingly declare that the preparatory education of medical students should partake of the most varied, thorough, and comprehensive scholarship which the most elaborate system of protracted college exercises could confer;" and he further stated, "Let every young man who intends to prosecute the study of medicine acquire as much classical learning as his opportunities will admit."

The first address ever delivered in Cincinnati to medical students was delivered by Dr. Daniel Drake, November 11, 1820, to a class of twenty-five pupils. In it occurs the following passage: "The opportunities for prosecuting a better course of preliminary studies have been created, even in the Western States, and no young man should hereafter be encouraged to become a student of medicine who has not prepared himself in a manner corresponding with the vast extent and the inherent dignity of that science. This preparation should not consist merely in a detached knowledge of his own language. He should ascend to its ancient sources, and drink deeply at its pure and original fountains. If the principles of medical science, which are now taught, be not the same that prevailed in Greece and Rome, they are partly expressed 'in the language of those learned and polished nations; and to be thoroughly understood, the words in which they are conveyed, must themselves be made an object of study.'"

More than fifty-four years have elapsed since Dr. Drake delivered his address. At that time Cincinnati was a small town. The West was a comparative wilderness. Schools were rare and difficult of access. Now, thriving towns and populous cities dot the land, and schools and colleges are within the reach and means of all. The stride which the great West has made in all that constitutes the highest civilization, material wealth, culture, etc., are simply miraculous. If it were possible for a citizen of 1820 to visit our city, and see the advancement that has been made in commerce, the mechanical arts, general education, arts and sciences, he would be more confused and dazed than Rip Van Winkle was when he awoke from his long sleep. Has the standard of medical education kept pace with this march of improvement? Are the standards for admission to and graduation from our medical colleges higher to-day than they were half a century ago? Are they as high? We all know that scores of men are graduated every year, who should have been remanded to the corn-fields and other departments of labor, where muscle is more in demand than brains.

Not only is no standard of preparatory education required for admission to our medical colleges, but the usual rules which govern regular medical colleges, viz., three years' study, and attendance upon two courses of lectures—the last one in the college which issues the diploma—are not always adhered to; and some colleges have issued diplomas to persons who have not attended a lecture in their institution. This is tantamount to selling a diploma—money, not proficiency, being the consideration.

When any college issues a diploma to an ignoramus, or to an individual who has not complied with all the conditions usually required by respectable institutions, it is guilty of a fraud upon society in certifying that he is competent to deal with the mysteries of life and death; it is guilty of a breach of faith with its honorable graduates; and it insults the members of the profession who have fairly earned their degrees by protracted and diligent study. A gentleman holding the highest rank in one of our churches, being a bishop, and having, besides D.D. and LL.D., an M.D. attached to his name, said to me, "I value my M.D. more than all my other titles, because I fairly earned it by hard study." How many physicians throughout the land can say, "I fairly earned my degree by hard study?"

An association like ours, having members in all the States from New York to California, can do much to counteract this demoralization of our profession. We can resolve that we will encourage no young man to enter upon the study of medicine who has not a thorough preliminary education; and we can resolve not to patronize medical colleges who will graduate incompetent men. An organization like ours can make public sentiment and control colleges.

A consideration of this question suggests another one which is well worthy of your attention. *Are the methods of instruction now pursued in medical colleges the best adapted to make intelligent and efficient physicians?*

We all know what these methods are—the whole course of medicine crowded into four or, at most, five months. The student spends from 9 A. M. to 10 P. M. in the lecture or dissecting rooms. On an average there are six or seven lectures each day of an hour each. The amount of physical endurance it requires, to sit through these lectures, day in and day out, is simply marvelous; and when an effort is made to comprehend, digest, and analyze them, the mind revolts, for it can not perform impossibilities. At the close of each day the student's head is full of a *medical hash*, wherein all subjects

are so completely blended that he can not distinguish one from another. Then there is no gradation or classification of studies. The beginner and the candidate for graduation sit side by side and listen to the same lectures. Would not more efficient instruction be given, and better results obtained, if a graded course were established extending over two or three years? Let there be two sessions each year; one a reading term and the other a lecture term, each four months long. Then the instruction we now cram into one session of five months, will be extended over eight, and the students will have some time for digestion.

The medical department of Harvard has adopted this course, and both students and faculty are pleased with the result. Speaking only for myself, it strikes me as a more rational one than the old method, and which is bound sooner or later to supersede it.

I have dwelt so long on the *spots* on our profession, that, if time permitted, simple justice would demand that I should refer to some of its triumphs.

I might show you how, through its instrumentality, diseases have ceased to exist which formerly swept the world as with a besom of destruction, viz., the sweating sickness, black death, and the plague. The latter, in 1665, when London was a small city, destroyed 68,000 of her people. How the deaths from dysentery in London, from 1667 to 1692, amounted to 2,000 per annum; how ague, which the merest tyro in medicine can now successfully treat, was once so formidable a disease that, in the year 1558, the fatality was so great in London that the living could hardly bury the dead; how scurvy formerly made such sad havoc, particularly among seamen, that, in 1776, Admiral Hosier, of Great Britain, "sailed on a cruise with seven ships, and buried his ship's company twice, when he himself died with it." How small-pox, before the time of Jenner, destroyed 40,000 persons annually in Great Britain alone, and it was estimated that the mortality over the whole world was 200,000 per annum.

Now, both scurvy and small-pox are preventible diseases, and their existence is a disgrace and should be constituted a crime, and the parties responsible for their existence should be subjected to fines and imprisonment. How the average mortality from consumption, from 1700 to 1821, was one in four, and now, according to Dr. Farr, is one in eight. How, during the past one hundred years, the general mortality has been reduced two-fifths.

Art. 5.—Comminuted Fracture of the Frontal Bone, with Depression of one of the Fragments, producing marked symptoms of Compression.

By JAS. L. NEAVE, M.D., late Resident Physician at the Cincinnati Hospital.

One of the most interesting cases of fracture of the skull that I ever saw, occurred in the practice of Dr. O. D. Norton, and was as follows :

The patient was a middle-aged German, employed at turning hubs in the Royer wheel factory. While thus engaged, the hub he was working at burst, and a fragment striking him in the forehead produced the injury to be described. When first seen, he was in a semi-conscious condition, with his forehead presenting a crushed appearance, and bleeding freely from several very ragged wounds, extending to the bone and denuding it. Two of these were cut into one for purposes of examination, and a large piece of depressed bone was discovered occupying principally to the left of the median line, but encroaching slightly on the right. During the few minutes necessarily consumed in making the preliminary examination, the symptoms of compression had rapidly increased, so that by the time the necessary information had been obtained, the patient was profoundly comatose, with stertorous breathing and marked puffing of the cheeks at expiration.

Without further delay, the depressed fragment was raised to its proper level by means of the screw and elevator, and then, as it appeared perfectly loose, it was removed entire, exposing the dura-mater for a space amounting to nearly one and one-half ($1\frac{1}{2}$) inches square. This nearly in the center of the forehead. The dura-mater did not appear to have sustained any injury. The entire frontal bone seemed to be broken into fragments, but none were removed excepting the piece mentioned, the remaining fragments being simply repositied as nearly as could be. Other fragments were so extremely loosened that they seemed to demand removal, but it appeared too much like removing the entire bony forehead, and it was thought best simply to raise them to their proper level, thus taking off the pressure, and allowing the man to die as quietly as possible ; for scarcely the slightest hopes were entertained of his recovery, excepting perhaps that he belonged to the class of society

whose vitality is sometimes something remarkable, and whose recovery from injuries that would almost certainly prove fatal to one of the better classes, has frequently been noticed.

It would be difficult to describe the fracture exactly, for several reasons, the first being the comminution of the bone. One large fragment extended from the line of separation between it and the piece removed, entirely across the bone to the right temporo-frontal suture, including the orbital ridge, and a portion at least of the orbital plate, as evinced by the protrusion of the eyeball whenever pressure was exerted on the fragment. The borders of this fragment there was not time to ascertain. By placing the fingers on each temple, and pressing on the forehead in almost any direction, crepitus could be distinctly felt. That the frontal sinus was involved, was evidenced by the air-bubbles that made their way through the blood, that welled up from the opening made by the removed fragment. The fingers were introduced into the mouth once, but the patient had such good control over the muscles controlling the lower jaw, that only a cursory examination was indulged in. Further research to ascertain definitely the exact condition of things was rendered impossible, on account of the increasing restlessness of the patient, who had commenced to show signs of sensibility to pain almost immediately after the removal of the depressed fragment. [It would seem almost superfluous to add that no anæsthetic was used during the operation.] The wound was closed by three sutures, and cold applications ordered. Three grains of calomel were given as a laxative, and this dose was repeated on the following day. Besides this, no other medicine was given during the entire time, the patient positively refusing all treatment.

Strangely enough, there was not a bad symptom during the entire progress of the case. Relief seemed almost instant upon raising the depressed fragments. The man's intellect, never very brilliant, appeared slightly obscured for a day or two, and he was rather more irritable than usual for a short time—nothing more. The wound healed kindly; a portion by first intention. There was a very little inflammation along the edges of a portion of the wound, but none of an erysipelatous character. It was extremely difficult to keep him in bed at all, after the third day; and about a week after the injury, his wife came to the office in great distress, saying that she could not manage him; that she had left him sitting up in bed, shaving himself, and that he threatened to get up,

and go down stairs. This latter, however, he did not do until after the third week, when he took his first walk on the street. A little after four weeks, he worked occasionally at the factory; and in less than three months after the receipt of the injury, he had resumed work on full time, as though nothing serious had happened. The fragments seem firmly united, and the forehead is solid enough, excepting immediately over the point where there was loss of bone. Excepting a very slight flattening of the face, there is no deformity; certainly not what might have been expected, after the receipt of such a crushing injury.

A more careful examination of the piece removed, showed it to be an irregular square, with one corner knocked off; or perhaps, more properly speaking, it was fan-shaped, with the tip pointing downward, immediately against the fronto-nasal suture. The extreme measurement from this point directly upward to the expanded border, was one and three-quarter ($1\frac{3}{4}$) inches—this border being just a trifle less than two inches. The piece was situate almost entirely to the left of the median line, only about one-half inch of the expanded edge encroaching on the right side. The external surface of the fragment presents an appearance of having been crushed and splintered off, there being but a small portion at the tip, near the fronto-nasal border, where the bone retains its normal thickness—the fragment being leveled from this point, extending an inch to the expanded border. A line of fracture also extends through the fragment, from the nasal suture, directly to the broad border.

The lines of fracture extended from the borders of this fragment in various directions, thoroughly comminuting the frontal bone, as before mentioned, and involving the orbital plate; and these fragments were so loosened that they might have been picked out with very little effort. Notwithstanding this very extensive injury, the patient not only recovered completely, but did so without a single untoward symptom.

Prize Essays to be presented to the Committee of the American Medical Association should be sent to Dr. L. P. Yandel, at Louisville, Ky., as Dr. J. D. Jackson, Chairman of the Committee, is spending the winter in Florida, and it is feared that the state of his health will not permit him to return in season to attend to his duties.

Proceedings of Societies.

THE CINCINNATI MEDICAL SOCIETY.

Society met February 16, 1875.

Dr. Holdt stated that he had a paper which he had already read at the Cincinnati Academy of Medicine, being chairman of Section on Nervous Diseases, and which he would read before the Society, if it was desired.

There being a general request to hear it, he proceeded to read a paper on progressive paralytic insanity. In the first place, he referred to the much greater frequency of the disease in Europe, giving statistics of some institutions on both continents, supporting his statement. He then gave a sketch of the course of the disease. The earlier periods of the disease are characterized by exaggeration of both the psychological and sensational functions. This is followed by convulsions, and more or less paralysis, accompanied by lessened intellectual power, ending in complete imbecility. The pathological changes present in the disease were then referred to, and the views of various authorities described. Some of them ascribed the changes to disturbances of the circulation due to disease of the vessels; while others considered the essential condition to be cellular disintegration, either primary or secondary to connective-tissue proliferation. The author considered the disease to be due to degeneration of the cortical cells of the cerebrum with pigmentary increase, accompanied by congestion, and followed by proliferation of connective tissue and atrophy. The membrane was affected only secondarily.

Dr. Carson moved that the discussion of the paper be postponed till next meeting. Carried.

Dr. Mussey announced that he would read a paper on the bichloride of methylene at next meeting.

The Society then adjourned.

The Society met February 23, 1875, *Dr. D. Clark* president *pro tem*. The minutes of the preceding meeting were read and approved.

The Society then proceeded to discuss the paper of Dr. Holdt on progressive paralytic insanity, read at the preceding meeting.

Dr. H. recapitulated the main points of his paper, giving the views of prominent alienists in regard to the development of the disease, some claiming that it is not the result of an acute process; others, that the disease is always preceded by some acute disease in the cortical substance or meninges. Dr. H. thought that the increased temperature in the early stage, the changes found in the cortical layer of the brain, and the increased weight of the brain, as found when death had occurred from accident during the early stage of the disease, led to the belief that it must be the result of an acute process.

As a cause of the disease, he mentioned overexcitement and overstraining, which first cause over-nourishment; but finally the recuperative process becomes impaired, and paralysis follows. Amyloid degeneration of capillary vessels occurs. This disease might be compared to alcoholic intoxication. If the period of excitement could be prolonged for several months, changes would occur similar to those found in this disease.

Dr. Comegys said that the subject of insanity introduced by Dr. Holdt as dependent on brain changes, was one of the most interesting that we could consider; and he hoped it would be continued from meeting to meeting, until we could review the subject at length. The condition of the exercise of brain functions is as much under the care of physicians as those of the stomach or other organs, and it is our duty to warn society in regard to its overtaking. Excessive use of the brain, more especially if there be a high action of its affective functions, leads to a deterioration, more or less rapid, of its organic conditions, the first manifestation of which will be a loss of self-control; and this will not be so much seen at first in regard to our life relation, as in regard to a correction of illusions or delusions.

The conceptual stores of the mind are laid up in associated forms, and we become dreamers or subjects of mere "trains of thought," if we lack the will or supervising faculty in our acts of thinking. In the "delirium of greatness," we have a full exhibition of this delusive process. Everything in the subject's mode of thinking is on an exaggerated scale. His superior wealth, strength of body, or powers of mind, etc., are always asserted. Mind is nothing without self-control, and the dominant faculty is a corre-

lation of the totality of the organic power of the brain. Will, in short, can not be exerted, if the material conditions of the brain are seriously lowered. We can have impulse only, or mere trains of thought, or inco-ordination of ideas in a general way.

The paper of Dr. Holdt exhibits the serious lesions of the gray matter of the periphery. Speaker had shown on a former occasion, when discussing diabetes, that some of the lesions of the brain-substance are remarkably similar to these in the *delire des grandeurs*, but differently located.

Dr. Carson said that although this disease had been under discussion for many years, great differences of opinion still exist as to the morbid condition. He thought the pathological changes in this disease were the same as in the advanced stages of some other cerebral diseases. There are also differences of opinion as to whether the morbid action arises in the brain, or has extended from the meninges. No reference has been made to other parts of the nervous system. Spinal changes are constant conditions in this disease. In cases of general paralysis, disease of the spinal cord and sympathetic precede the disturbance of the brain. Dr. C. now had a patient under his charge, about thirty years of age, with general aspect of good health; no syphilitic history. His health has always been good, except that at one time he had paralysis of left arm for ten days; and again, a year later, he noticed some difficulty of speech, which lasted a short time, and then disappeared. About ten weeks ago, the same condition reappeared. He has no pain in his head; no paralysis of special nerves; no paralysis of tongue or lips; but some degree of indistinctness of articulation. He thinks it will develop into a case of general paralysis. Insanity may develop, though at this time there is no indication of it. He thinks there is no difference between "general paralysis" and "general paralysis of the insane."

Dr. Comegys mentioned the case of a little girl who, in July, was attacked with what was supposed to be intermittent fever. She had pain in her head, and two or three convulsions. The fever subsided, but she was out of her mind. She was a mere animal, without moral or intellectual life; entirely dispossessed of intellect and emotion; no shame; did not recognize her friends; all affection lost; she had been rather precocious. He regarded her condition as beginning in meningitis of the periphery, the gray matter becoming involved; no affection of the base. He gave her

iodid. of potass., hoping to promote absorption of the plastic matter thrown out by the inflammatory process. In a month or two, she so far recovered as to be able to recognize her friends; but a spell of sickness made her worse, and he was again consulted. Bichloride of mercury was given, since which time he had not heard from her.

Dr. Culbertson referred to the great disproportion of cases of general paralysis in the lunatic asylums of this country to those of Europe, as shown by asylum reports. In this country, the disease appears to be rare as compared with Europe. He thinks a more careful classification would show a greater number in the asylums of this country. He thinks too much of the time of asylum superintendents is devoted to business affairs of the institution, and not enough to the investigation of insanity.

Dr. Holdt thought there was great difference between "general paralysis" and "general paralysis of the insane." The difference in the symptoms could not be overlooked. On comparing the brain of the former with the latter, great differences will be observed. In the former, the cells would be small, well marked, not infiltrated with fat; no cells showing proliferation of nucleoli.

On motion of *Dr. Comegys*, the paper was made the special order for the next meeting.

REPORT OF CASES.

Dr. Comegys reported the following case of encephaloid cancer of left kidney, in a child three years old.

Daisie W— was brought from Ripley county, Indiana, and placed under my charge, on the 27th of December, 1874.

Two days previously, her mother had discovered a swelling in the left flank, and upon consulting *Dr. Clark*, of Delaware Station, he gave as an opinion that it was an "abscess of the kidney."

She was three years and three months old; fair complexion, light hair, and blue eyes. Her expression was bright, and she moved about actively. Her appetite was poor; bowels regular; no unusual thirst; pulse weak, but not very frequent; temperature normal. She was not fretful, and readily permitted examinations. Mentally, she was quite precocious, and very lively in her disposition. Her only complaint was a tired feeling after playing moderately. It was the discovery of the tumor in the side that gave her mother the first alarm about her health. Before this, however, she had been subject to attacks, at irregular periods, of

severe headache and vomiting; sometimes diarrhea accompanied these attacks. Since June, 1874, a change in her health had been noticed, marked by loss of appetite and spirits, with more or less diarrhea; but there were intervals of encouraging health. In the fall of 1873, she had an obstinate attack of impetigo of the scalp, and some enlargement of the cervical glands accompanied it; but of this she soon recovered. She had two severe falls during the fall of 1874. On the 21st day of November, 1874, she passed some blood with urine; on the 26th, passed a much larger quantity. No great anxiety seems to have affected the mother until she discovered the tumor on the 25th of December following. Then she called in her physician, Dr. Clark, who believed that it was an "abscess of the kidney."

The tumor occupied the whole of the left lumbar region, and extending forward as far as the median line at the umbilicus, upward to ribs, and downward into the inguinal space. There was a slight sense of fluctuation. Guided by this, and the fact that she had had two severe falls (one through a distance of four feet, striking the side) and the hæmaturia, I was inclined to the view that it was a hæmatoma developed in the pelvis of the left kidney. I penetrated it with the needle of a hypodermic syringe, and readily drew it full of blood. Dr. Wm. Carson saw the case with me next day, and we inserted a large-sized trocar, and drew off perhaps a half an ounce of blood. It was now evident that the diagnosis of a hæmatoma was not to be entertained, but that there was strong probability of malignant growth. The case was remanded home, with an unfavorable prognosis. She lived four weeks longer, gradually failing from entire lack of appetite and great suffering in the abdomen, to which was superadded obstinate constipation.

The child's father died of consumption, and one of his brothers. Her paternal grand-parents died of old age. The mother has had hæmoptysis; her mother, a sister, and two brothers have died of consumption; also two cousins of the mother have died of cancer.

Her body was brought to the city for interment, which gave us the opportunity for an autopsy, which was made by Prof. Mackenzie, in the presence of Drs. Carson, Dandridge, E. T. Comegys, and myself.

A large encephaloid mass was found, which Dr. Mackenzie will now give an account of. In cancers of the kidney, more than one-half occur in young children.

Dr. Mackenzie presented the tumor for inspection, and made the following report of the autopsy, which was made February 5th.

Body much emaciated; very little post-mortem rigidity; abdomen greatly distended; the left side quite dull on percussion; the right side tympanitic. Upon opening the abdominal cavity, a small quantity of serous fluid tinged with blood escaped. The whole of the left side of the abdomen was occupied by a tumor, which extended from the diaphragm to the left iliac fossa, and from the left abdominal wall, some distance beyond the median line to the right. The small intestines were tolerably firmly adherent to the right side of the tumor, and the descending colon to the anterior surface, along which it passed for a distance of seven inches. The spleen and stomach were adherent to it above. The liver was pushed upward about an inch above the edge of the cartilage. Upon the removal of the tumor, which was attended with some difficulty in consequence of the adhesions which it had contracted with the neighboring parts, it was found to be the diseased left kidney. Its length was seven inches, its breadth seven inches, and its weight four pounds two ounces. Its surface was nodular, and it was invested by a firm fibrous membrane. At the inner part of the anterior surface was an opening in the capsule three inches in diameter, through which protuded a red fungoid mass, easily broken down. On section, the tumor presented a tissue of a pale color, brain-like in consistence in some places, firmer in others. A few ecchymotic patches were scattered through the substance. Several tolerably large cysts containing colloidal matter tinged with blood, were found in different parts of the tumor. The ureter was quite pervious, and was traced into the tumor for some distance. No normal kidney-substance was found. The vena cava ascendens situated just beneath the tumor, was dilated, and contained a mass similar to that composing the tumor, which had seemingly grown from it into the vessel, completely occluding it. The descending colon had undergone great compression, and was considerably diminished in caliber. It, as well as the transverse colon, contained very hard scybala.

The liver contained numerous white masses, varying from the size of a pea to that of a hempseed. Most of them were situated beneath the capsule, but some of them were disseminated through the substance of the organ. The larger ones were softened in the center. The tissue of the liver was rather firmer than normal, and somewhat transparent at the edges.

The right kidney was firm and translucent in thin sections. The lungs were normal.

Under the microscope, the tumor was found to consist almost entirely of small granular cells—some spheroidal, others stellate; nuclei were not visible in them. The amount of intercellular substance was very small.

The Society then adjourned.

Treatment of Acute and Chronic Bronchitis and Asthma.—Dr. Spurgin, of York, states that he has tried iodide of potassium in over a hundred cases with almost invariable success; in fact, with such success that patients have expressed themselves by saying, "It has acted like a charm." Others have said that no medicine ever had any real effect upon their complaint before. Iodide of potassium has a marked effect upon the breathing, reducing the frequency of the respirations; perhaps also, he thinks, overcoming spasms. Almost after the first dose patients have stated they have felt the medicine touch their complaint. Dr. Spurgin usually prescribes it with carbonate of ammonia, and when the cough is very troublesome, adds tincture of belladonna and ipecacuanha wine. In one very bad case of broncho-pneumonia he tried iodide of potassium with tincture of hyoseyamus and ammonia, and the respirations were quickly and astonishingly reduced from forty in a minute to less than half that number. He adds that he has purposely given a mixture containing ammonia, belladonna, ipecacuanha wine, spirit of sulphuric ether, etc., without iodide of potassium, and has not found much benefit result from their use. After this he has added the iodide of potassium, and found the patient relieved almost at once.—*British Medical Journal*.

School Hygiene.—The physicians of Eastern Middlesex, Mass., have petitioned the Board of Health to enforce "such rules as will prevent the attendance in public schools of any child residing in a family where there is, or has been, a case of measles, scarlet fever, or whooping-cough, until the physician in attendance on such case of disease shall have furnished a certificate, that in his opinion, the period of danger from infection is past, and that he knows that the infected premises have been thoroughly disinfected."

Editorial.

College Commencements.—Since our last issue went to press, nearly all the medical colleges have had their annual commencement exercises. In some of the colleges, there has been a marked increase in both the number of students in attendance, and of graduates, over former years; while in a few instances, the reverse has been the case.

In our own city, the Medical College of Ohio commencement exercises were held on the 25th of February. The graduating class numbered 102, and the matriculants 282. The exercises were held in Pike's Opera House, in the presence of a large and brilliant audience, the hall being completely filled. After the delivery of the diplomas, and award of prizes to successful contestants, interspersed with music, came the event of the evening, in the address of one of the alumni, G. Volney Dorsey, M.D., on medicine as a science and as a learned profession. The exercises closed by adjournment of the audience to their homes, and of the alumni, graduating class, and students to the house of the dean, Dr. Bartholow.

The Miami Medical College commencement exercises were held on the evening of March 3, in Pike's Opera House, where again it seemed as if the people had turned out *en masse* to witness the conferring of the doctor's degree on a class of 35 young men, and to listen to other orations on subjects pertaining to medicine. On this occasion, the address of the evening was delivered by a layman, Judge M. B. Hagans. The address was very carefully prepared, and exhibited an amount of knowledge of the subject of medicine that would be a credit to many a man who attaches the symbols M.D. to his autograph. Yet, we could not but feel, for all that, that the speaker was slightly out of place. Surely there is an amount of oratorical talent going to waste in the medical profession, that might be both materialized and utilized on such occasions. Just here, we will take occasion to say that we are glad to have a man with so much intelligence on medical subjects as Judge Hagans a member of the Board of Trustees of the Cincinnati Hospital. At the conclusion of Judge Hagans' address, and a musical

interlude, Prof. Murphy delivered the valedictory, taking for his principal subject preventive medicine. It was just such an address as should be placed in the hands of all who are in authority, with the decree carried out that every man of them should be compelled to first read the address, and then heed its teachings.

The succeeding evening, the alumni of the college had a grand reunion and banquet at Kepler's. We always feel very modest about expressing ourselves on the subject of the capabilities of an average doctor's stomach on such occasions, and we are yet more affected when we behold a class of young men, just freed from cramming, their brains for the ordeal of examination, let loose in the presence of a table laden with the choicest viands, and with an indefinite additional amount in the larder, already prepared. With feelings of awe, we looked upon those young men, who, from force of habit, watched the preliminary proceedings of their seniors and professors, and as if inspired by an ambition to do or die, they began the process of attempting to wear smooth their digestive organs. We can not but say that if they did not succeed in that attempt, it was not because of lack of effort. Again was the laity impressed to do a large part of the orating. The meeting was certainly a pleasant one, and we hope mutually profitable to all concerned.

The Cincinnati College of Pharmacy commencement exercises were held on the evening of March 8, on which occasion seventeen young men had conferred on them the degree of doctor of pharmacy. The business of the apothecary—or, as they choose to call themselves, pharmacist—is so intimately connected with that of the physician, as to make many of their interests common. It is with no little pride that we are able to say, that, on this occasion, the Cincinnati College of Pharmacy graduated a class third in size in the United States. One of the pleasant features of the evening was the presentation by the class to the faculty of the college of a fine portrait, elegantly framed, of the late Dr. Chapman, who was, until his death, a member of the faculty. Prizes and speeches were also in the order of exercises. And yet again was the legal profession called on to do duty. This time the Hon. Samuel Hunt answered when his name was called, showing almost as much familiarity with the mortar and pestle, and the compounding of poisons, as if he were to the manor born, and was himself a veritable pharmacist. After which there was an adjournment of the audience, who had filled to overflowing College Hall, to their homes, and of the faculty, alumni association, and class to Kep-

ler's, where, we are bound to say, the knights of the mortar and pestle did justice to the mixtures and preparations set forth by the host. The occasion was certainly very agreeable to all who were present.

The College of Pharmacy should receive all the encouragement it is possible for the medical profession to bestow in that direction. The faculty is composed of gentlemen eminently qualified for their positions, and we know they are doing a good and commendable work.

Wanted—The following numbers of the LANCET AND OBSERVER: January and December, 1863; January and October, 1864; November, 1865; May, 1866; December, 1868; March, 1869; June, September, November, and December, 1871. Twenty-five cents a copy will be paid for the above, or that amount will be credited on subscription.

Direct to LANCET AND OBSERVER.

A Card.—We desire to call the attention of the medical profession to the following analyses of cincho-quinine, from some of the most eminent chemists.

BILLINGS, CLAPP & Co.,

Boston.

"CHEMICAL LABORATORY OF THE UNIVERSITY OF PENNSYLVANIA, }
"WEST PHILADELPHIA, *January 29, 1875.* }

"MESSRS. BILLINGS, CLAPP & Co.—*Gentlemen*:—I have received, by express, a package marked, 'Sealed by S. P. Sharples, January 22, 1875,' and containing a bottle of cincho-quinine, with the label of 'James R. Nichols & Co., Chemists, Boston,' which I have tested, and found it to contain *quinine*, *quinidine*, *cinchonine*, and *cinchonidine*. Yours respectfully,

F. A. GENTH,

"*Professor of Chemistry and Mineralogy.*"

"LABORATORY OF THE UNIVERSITY OF CHICAGO, }
"CHICAGO, *February 1, 1875.* }

"I hereby certify that I have made a chemical examination of the contents of a bottle of cincho-quinine; and, by direction, I made a qualitative examination for *quinine*, *quinidine*, and *cinchonine*, and hereby certify that I found these alkaloids in cincho-quinine.

"C. GILBERT WHEELER,

"*Professor of Chemistry.*"

Reviews and Notices.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. VON ZIEMSEN. Vol. II. Acute Infectious Diseases. By Professor THOMAS, of Leipzig; Dr. KURSCHMANN, of Berlin; Dr. ZUELZER, of Berlin; Prof. HERTZ, of Amsterdam; and Prof. VON ZIEMSEN, of Munich. ALBERT H. BUCK, M.D., of New York, Editor of American edition. New York: William Wood & Co.

As indicated above, this volume treats of the acute infectious diseases, measles, rubeola, scarlet fever, variola, erysipelas, influenza, hay fever, malarial diseases, and epidemic cerebro-spinal meningitis. The history, etiology, pathology, pathological anatomy, symptoms, complications and sequelæ, diagnosis, course, duration and terminations, prognosis, and treatment are given in the fullest and most complete manner. On the subject of scarlet fever, Professor Thomas says: "The influences of *poverty* and *opulence* upon the fatality of scarlet fever are not so cogent as have been supposed. Of course, the wretched homes of the poor, and the entire absence of nursing and care, cause an increase of danger, which those in better circumstances are able to avoid; but of far more importance as a prognostic indication is the degree of personal predisposition to scarlet fever, or, in other words, the degree of resistance to the influence of the contagion, which is not materially affected by external circumstances." A corroboration of the views expressed by Dr. J. J. Quinn, in a paper published in the February number of the LANCET AND OBSERVER, 1875. The only prophylaxis recommended is absolute isolation, with disinfection of all articles about the premises. "The expectoration, urine, and excrements should be received in vessels containing disinfecting fluids (chlorinated lime, carbolic acid), and frequently removed." No other prophylactic measures than isolation and the disinfection of everything contaminated by the contagion are regarded as of any value. In the treatment of the disease, where there is a high degree of fever, the cold-water applications are recommended, and in all cases a daily bath, the temperature of the bath being graded according to the intensity of the fever.

On the subject of hay fever, Dr. Zuelzer says: "The patients belong exclusively to *the educated classes*—the clergy, officers, phy-

sicians, merchants, and their relations. The number of physicians is relatively the most largely represented, perhaps because they pay the most attention to the disease. It is particularly noticeable that no person living in the country is found among the patients." That may be the case in Europe, but does not at all correspond with our observations in this country, as we have seen cases of this disease in persons belonging to the laboring class, and who live in the country. We would infer from the above statement that the fact that an individual suffers from this malady indicates that he or she possesses a superior education, and that physicians are correspondingly the most highly cultivated and educated class, as they furnish the largest proportion of those affected by the disease. The article is very unsatisfactory, and not what we had hoped to see on this subject in this great work.

The article on malarial diseases by Professor Hertz, and that on epidemic cerebro-spinal meningitis, by Professor Zeimssen, are especially elaborate and complete, leaving apparently at this time nothing more to be written on those subjects.

The Functional Derangements of the Liver. Being the Croonian Lectures delivered at the Royal College of Physicians, in March, 1874, by CHARLES MURCHISON, M.D., LL.D., F.R.S. New York: William Wood & Co.

These lectures were first published in the *Lancet* and in the *British Medical Journal*. After careful revision by the author, they are presented to the medical profession in the shape of a neat monograph of 182 pages.

There is probably no expression more common among both patients and physicians than that "the liver is out of order," and that certain symptoms are due to "biliousness." In fact, it has seemed to us as if some persons were able to trace a connection between every known disease and "torpidity" of the liver. To all physicians who are troubled with "liver complaint," we advise the immediate addition of this little work to their library.

Chapter I. is devoted to a description of the functions of the liver in health, showing that the liver is not only the bile-secreting organ, but is also one of the organs mainly concerned in the process of sanguification, and exercises most important functions in assimilation and nutrition. Modern research shows this organ to be endowed with the function of blood destroying or purifying process, and that it contributes, in a great degree, to the destruc-

tion of albuminous matter derived from the food and textures, and in the formation of urea and lithic acid, which are subsequently eliminated by the kidneys.

Lecture II. takes up the affections which result from abnormal disintegration that take place within the liver—viz., lithemia, gout, urinary calculi, biliary calculi, degeneration of the kidneys, structural diseases of the liver, degeneration of tissues throughout the body, local inflammation, and constitutional diseases.

Dr. Murchison is a firm believer in the cholagogue effects of mercury.

This monograph is an excellent contribution to medical literature, and is worthy of a place in every medical library.

Lectures on Diseases of the Respiratory Organs, Heart, and Kidneys.

By ALFRED L. LOOMIS, M.D., Professor of Pathology and Practical Medicine in the Medical Department of the University of the City of New York, etc. New York: William Wood & Co.

This work consists of a series of lectures delivered in the Medical Department of the University of New York, to the class of 1874. They are just such lectures as we are glad to know are delivered in our medical colleges—practical in their character, and exhibiting a thorough knowledge of the subject on the part of the professor, which enables him to impart that knowledge to his class in language easily understood, and at the same time impressing them with its importance.

In such a work we did not expect to find very much that is actually new to the men who read in the profession. In reading some of the lectures we could not but feel that they would have been of very much more value to the class if they had been illustrated by the exhibition of a few patients affected by those diseases. To the advanced student, and practitioners attending a course of lectures for the purpose of brightening up, there is nothing that can take the place of bedside teaching. We like the systematic method in which these lectures are arranged, and regard them as excellent in every way.

Scribner's Magazine begins a new volume with the May number. There is one good reason for its constantly increasing popularity—its articles are of such merit as to deserve enthusiastic praise from its readers.

THE CINCINNATI
LANCET AND OBSERVER.

J. C. CULBERTSON, M.D., Editor.

VOL. XVIII.—MAY, 1875—No. 5.

Original Communications.

Art. 1.—Annual Address delivered before the Zanesville Academy of Medicine.

By the President, C. C. HILDRETH, M.D.

Fellows of the Academy:—On taking leave of the chair, it becomes the duty of the president to pronounce a valedictory. As our by-laws limit the time of all addresses to twenty minutes, the fellows can not expect on this occasion an elaborate effort, nor an exhaustive dissertation upon any professional subject. Let us then rather devote the few minutes allotted us, to matters personal, and of vital interest to the Academy. "The Zanesville Academy of Medicine" is now in the second year of its existence. Its origin, we believe, may fairly be traced to a suggestion of Dr. Ball—viz., that the faculty of Zanesville take the contract to attend the poor in the city, and at the county infirmary, for a certain sum of money; and that we invest the same in books, journals, etc., with special reference to the founding and building up of a medical and scientific library. The suggestion was a happy one, and met the unanimous approval of the faculty. The idea was novel, as I be-

lieve, in this or any other country; the plan unique and practical. It met with the decided approval of the city and county authorities. The terms proposed were accepted; and a contract made between the parties at interest, which was mutually agreeable, and which, so far, has been faithfully fulfilled. But before the Academy could make a contract which would have any legal value, it became necessary for us to procure a charter, which would give us a right, as a body corporate, to hold real and personal property, sue and be sued, purchase and sell, and all the other vested rights and privileges usually conveyed by such instruments. The charter was readily procured, and under its protecting folds we have perfected our organization; have adopted a constitution, a code of by-laws and of ethics, a fee-bill, and other measures of vital importance to the welfare of our institution. It is matter for congratulation that we commence our second year with prospects still more flattering. We have secured appropriate and eligible rooms upon a lease decidedly favorable to the Academy. We are in receipt of journals from all the large cities of our own country, and from many medical centers in Europe. We have upon our shelves many rare and valuable books, plates, and journals, which already form the nucleus of a library that can not fail to increase rapidly in value so long as we maintain our organization. That our Academy is growing in influence and in honor, will not be questioned. If we go not up higher, if we attain not a far more exalted and enviable position in the medical world, the fault will surely lie at our own doors. Again, it is matter for congratulation that our funds for the purchase of books, etc., will, for the present year, be largely increased. For this desirable result, we have to thank the devotion to duty, the self-sacrifice of our country members, in making themselves stockholders in the Academy. May we not hope and trust to find the name of every reputable physician in the county on our list during the present year? Self-interest, joint ownership of real and personal property, should bind us to the Academy; but far nobler bonds should be our love for the profession, and our fellow-members—love for an organization which can not fail to make us more skillful and accomplished physicians, more harmonious in our intercourse with each other, more honorable men, more useful and influential citizens. If we can fairly expect such results from our organization, let us foster and protect it, and jealously guard its interests.

But how can this Academy make us better practitioners? First,

It will, in course of time, furnish a library, upon whose shelves will be found the accumulated wisdom and science of the centuries that are past, and every new discovery, invention, and practical fact of the present, which can aid us in the successful treatment of disease. When the busy practitioner is in doubt about the proper treatment of a given case, let him take from our shelves a treatise which some specialist has written for him on that subject, and when he has carefully studied its contents, and found out how very little he knew about it, let him be truly thankful that some men have devoted a lifetime to the study and treatment of the diseases of a single organ, and thus have acquired knowledge and skill in no other way attainable. This life is too short, and the field of medical science too expansive, for any one mind to grasp and comprehend the whole. We owe to specialists nearly every valuable recent invention, every new fact and method, every new principle discovered, as well as nearly all practical improvements in treatment. Hence, in all large cities, every branch of medical, surgical, and obstetrical science is in the hands of specialists, and the wealthy, the refined, and intellectual classes will be found among their patrons. An amusing anecdote appeared recently in a foreign journal, which, whether founded on fiction or fact, is in happy illustration. An aristocratic lady of London called upon Dr. Watson to prescribe for some ailment of her stomach. This accomplished, the doctor found also some disease of her lungs, for which he was about prescribing, when she politely declined, saying that Dr. Williams had charge of her lungs, Dr. Murchison looked after her liver, Dr. Bird had charge of her kidneys, Spencer Wells attended to her pelvic organs, but Sir William Gull had her heart in his keeping. However ludicrous this may sound to American ears, it only serves to show the practical good sense of the lady, in intrusting her several organs, when diseased, to the care of those medical men best qualified by special study to treat them successfully. Secondly. This Academy can not fail to make us more skillful practitioners, by compelling us to work. The preparation of essays, reports, and papers—the careful reading up on subjects for discussion and debate, absolutely compels an amount of research and reflection which can not fail to stamp upon our memories facts, and methods, and principles of inestimable value in practice. No man can attain eminence in our profession without work. The man of genius, of superficial and showy accomplishments, may succeed for a time; but it is the

plodding, persistent, indomitable worker, if also blest with a full supply of common sense, who will finally carry off the prize; for work, like "blood, will tell" in the race for distinction. Professional work is never lost. The time will surely come when knowledge thus acquired will be applied to advantage. If nothing else, work disciplines the mind, and urges on to nobler efforts. It bids us go up higher. Some mysteries of life, of nature and disease, the human mind can never fathom. The finite can not comprehend the infinite. The ultimate cause, the very essence of life, the grand motor force in nature and throughout God's universe of matter, the intellect of man can never grasp or understand. As yet we are like children playing on the sea-shore, picking up here a pebble of truth or of theory; there, a shell of fancy or of fact; while the great ocean of knowledge lies beyond our reach. Men of true science are always modest and diffident. They know and deplore their ignorance. So the true physician is neither vain nor boastful. He is but a calm intelligence, whose reason is never influenced by passion, whose judgment is never controlled by his sympathies nor biased by visionary theories. He casts down his head in shame, as he confesses how very little he knows of disease, how much he has to learn. The astronomer, to whose enraptured vision the glories of the heavenly bodies are unfolded, if undevout, is said to be mad; so the physician, who, looking over the vast domain of medical science, imagines he has nothing more to learn, should be "written down an ass." Medicine is a progressive science. What the telescope and spectroscope are doing for astronomy, the microscope, the arts of the chemist, the labors and "instruments of precision" of the specialist, are doing for the practitioner. They are bringing order out of chaos. They are throwing a flood of light upon subjects hitherto dark, mysterious, incomprehensible.

To keep pace, then, with medical progress, we must work, we must study, we must "read, mark, learn, and inwardly digest" the ideas, the principles, the facts discovered, the practice worked out by the great thinkers of the profession, or we fall behind in the race for distinction.

Again, this organization can not fail to harmonize the profession here, as well as add to its influence. Our frequent meetings, our social and professional intercourse, the collision of mind against mind in debate, the interchange of ideas, and sentiments, and opinions in this hall, creates within us a kind of fraternal regard and respect, which we carry with us outside these walls. We are from

this cause like a band of brothers, having a common interest and purpose. The professional standard of excellence is always advanced in cities in which medical societies flourish; while discord and dissension, ignorance, apathy, or downright quackery, abound in those places where similar institutions can not be sustained. Again, this organization will not only add to our harmony, but it will promote our pecuniary interests, by the establishment of a liberal fee-bill. Medicine is a liberal profession, and it is but right that it be liberally sustained. Under its benign influences, the duration of human life has been gradually extended, and the sum of human happiness vastly increased.

Medicine is a charitable profession. It excels all others in the magnitude, the duration, the self-sacrifice of its charities. Like the gentle rain from above, its blessings descend alike upon the just and unjust, the poor and wretched, the rich and prosperous. If, in one case, our services are rendered without money and without price, it is but just that in the other our labors should be liberally rewarded. To this end, fee-bills are instituted in nearly all local medical societies. They may be said to be a professional necessity. The law will allow such compensation only for our services as may be usual or customary in the place where they are rendered. Hence, fee-bills, approved by a majority of the practitioners of any locality, are regarded by the courts as evidence of the justice of claims. Fee-bills are more apt to be unjust to the profession than the public. To prove this, we have only to notice how few practitioners at the close of life attain even a competency, to say nothing of wealth. It is but just that a profession acquired with so large an expenditure of time, and money, and intellectual labor, should yield its members a comfortable support while alive, and, after death, should leave its widows and orphans a competency. Look around you, and see how many of your departed brothers leave their families in absolute want. How many, except for a fortunate life insurance, or other business investment, would have left them helpless and penniless? How very few leave them independent or wealthy? The average duration of life is much less in the medical than in the other learned professions. Is not this an honest argument in favor of liberal fees? The lawyer who rescues the neck of the felon from the halter, will demand his pay in thousands, and the world will justify him in taking the last dollar from his client; but the physician, who just as certainly saves the life of his patient by skillful medication or skillful surgery, is ex-

pected to demand a mere pittance in comparison. Is this right and just? Is the life of the felon client more valuable than that of the honest patient? If, then, our schedule of fees is so constructed as to yield the practitioner only a comfortable support when living, and, after death, his family only a decent competency, is it not very clearly our duty, as well as interest, to be governed by it? Any other policy is suicidal; it is unjust to ourselves, our families, and our brother practitioners. To underbid your professional brethren, for the sole purpose of getting business, is always considered disreputable. It is saying to them, I propose to do business at fees so near starvation prices that neither you nor I can accumulate anything. If you do not come down to my fees, I shall steal away your practice, and compel you to leave your profession, or starve your family. This is disgraceful, dishonorable, and should not be tolerated. Good citizens in any locality are always willing to pay physicians fees pronounced just and equitable by the united voice of the profession in that locality; and nothing less should be asked or received. The learned Dr. Drake once remarked, that the physician who has passed the age of fifty, and is afraid to advance his fees, has mistaken his calling. So, we may say that the medical man who has nothing to commend him to the public, except the infinitesimal size of his charges, has most assuredly got into the wrong profession. I see in this matter of fees and fee-bills the only disturbing element which is likely to mar the harmony of this Academy. When the united voice of the profession condemns an act or course of conduct, it is folly for two or three to resist the verdict. No member of our ranks can long maintain the confidence of the public, if ostracized by all his brethren. In view of these facts, may we not hope that all the members will willingly sign the fee-bill which your committee has prepared, and in the future be governed by it. If for no better reason, let me beg you, do this for the sake of peace, harmony, and good fellowship in the Academy.

There are other matters of interest to the Academy, to which we would gladly refer, did time permit. Before we close, however, let us inquire what are the future prospects of this Academy? How long is it likely to survive the mistaken kindness of its friends or the malicious assaults of its enemies? In nearly all organizations, medical or otherwise, you will find certain discontented spirits, who, if not suffered to rule, will conspire to ruin; men of such insufferable vanity and egotism as to believe that nothing good can orig-

inate outside their own foolish heads; men never content with the existing order of things, but always desiring change, and always predicting disaster; men never willing that the voice of the majority shall govern, if not in accord with their wishes. Such men, like Cassius, are dangerous. The peace, harmony, and usefulness of any institution will always be promoted by their permanent withdrawal. Again, in nearly every organization, medical or otherwise, we will find a few passive spirits; men who have not brains or independence enough to form and maintain opinions of their own, but who follow the lead of some bolder and more aggressive spirit, as the dog follows his master. Such men are not dangerous, but simply contemptible. But in modern times, I am happy to say, spirits like these never control intelligent bodies. In medical organizations especially, there is always found a substratum of hard common sense and business capacity, in the great mass of the members, which, like the balance-wheel in the engine, regulates and controls their actions. In this Academy, this element of common sense is clearly the governing power. Relying on this, we make the prediction that this organization will survive and flourish when all its present members lie under the sod. Our devoted fellows having sacrificed so much to sustain and perfect this institution, in its feeble infancy of hope and promise, will never desert it in its sturdy manhood of usefulness and power. Financially, we have nothing to fear; our income for the current year alone, will amply supply our wants during the five years' lease of this hall. Should our income be suddenly cut off, a small additional assessment will pay all our expenses. If one-half the money annually expended in books and journals by our members individually, was thrown into our treasury, it would more than pay our present subscription list. This would willingly be done, if necessary. There are no clouds, then, in our financial horizon.* Again, this Academy, when firmly established, will receive many valuable bequests in the "last will and testament" of its members. Fellows who have no sons to educate in the profession, will direct their books and journals to be finally added to our library. So, also (if found worthy), we may anticipate many valuable bequests from friends outside the profession. Your retiring president, to show his enduring interest in an institution, which, in an humble manner, he has helped to found, and also to

* The income of the Academy will be about \$1,600 for the year 1875, with a fair prospect of an annual increase.

furnish an example which he deems worthy of imitation, will here announce his purpose to transfer to this Academy, either by his own hand or by his executors, his entire medical library, journals, instruments, pictures; in fine, everything of a professional character contained in his office. This he will do, in grateful acknowledgment of numberless favors received from professional friends during a long life in active practice; and under the conviction that no other disposition of his property will prove so satisfactory to himself, or of such permanent benefit to the profession in this vicinity.

Believing and trusting that this hall will witness many happy reunions of the fellows of the Academy, at our annual sessions in May, your first presiding officer bids you farewell.

Art. 2.—The Action and Use of Mercury on the Animal Economy.

By WALTER LINDLEY, M.D., House Surgeon Eastern District Hospital, Brooklyn, N. Y.

The *modus operandi* of mercury has been satisfactorily explained by only one man—Paracelsus. He was the leader of the “chemic school,” in the early part of the sixteenth century, and, with his followers, believed the human body to be composed of but three ingredients—viz., salt, sulphur, and mercury. Consequently, when a patient came to him needing mercury, instead of saying, as our modern Æsculapius might, “You have caught the syphilis,” he would say, “You have been wasting too much of your mercury;” and, I suppose, would estimate the amount lost by the use of a pair of Fairbanks’ scales, “before and after taking,” and prescribe accordingly. Of course, these latter remarks of mine are merely reasonable conjectures; but, in the language of Headland, the principal points in this essay are so clearly stated “that the overthrow of any one of these extra hypotheses would not shake them or in any way invalidate their truth.”

Unfortunately for the mercurial theory of Paracelsus, and for the peaceably inclined and quiet-loving members of the profession, it was demonstrated that there is normally no mercury in the body; and the manner of the action of mercury has been a subject of heated, unsatisfactory discussion ever since, from which the

writer of this thesis will hold himself aloof in silent, yea reverent awe.

In regard to the physiological action of mercury, I think the three theorems given by Headland present the facts clearly and concisely—viz: 1. It is absorbed and passes into the blood; 2. It disintegrates or decomposes the blood, and wastes the body; 3. It is ultimately excreted, and passes out by some glands more than others, increasing secretion, both healthy and morbid.

That mercury is absorbed, there is no lack of proof. As early as 1767, mercury was discovered by Barry circulating through the blood-vessels, while others found it in the bones of venereal patients. One physician obtained it by scraping the walls of a hospital in which venereal patients had been treated, the metal having been excreted by the lungs and perspiratory glands. Another instance of a similar character is where internes in venereal wards were salivated by the mercurial vapors from the patients. The bichloride, owing to its solubility, is the most readily absorbed of the mercurial preparations. Headland says that when there is but a normal quantity of solvent matter in the body, only one-hundredth part of a dose of calomel will be absorbed, the balance passing off in the feces. The bile is the principal agent in forming a solution.

The proof of the second and third theorems is contained in the following statement of the results of mercurialization. The first indication of its action is a peculiar mercurial fetor of the breath and soreness of the teeth on pressure with any hard substance. On continued use of the drug the gums become swollen, soft, and spongy, with tendency to bleed, while there is considerable increase in the discharge of saliva, urine, and feces, which should warn the physician to have its use discontinued. If the treatment is still persisted in, the discharge of saliva will become enormous, the tongue will enlarge and protrude between the lips, the teeth become loose, and this is sometimes followed by necrosis of the maxillary bones. There is also purging, thought to be caused by the mercury affecting the pancreas, and a cachexia peculiar to mercurial treatment ensues. If the blood be examined, it will be found *watery*, with but *feeble power of coagulation*, and containing a greatly diminished quantity of *albumen*, *fibrin*, and *red-blood corpuscles*, while in their stead will be considerable quantities of fatty matter. During this time emaciation will take place rapidly. Mercury is diuretic, cathartic, and cholagogue.

Although Dr. Thudichum, in 1863, wrote, "Calomel is not a cholagogue, but diminishes the secretion of bile," yet I think the majority of the profession are fixed in the belief that it is a cholagogue, and content themselves by saying, with Professor Wright, "If it is not a cholagogue it answers the same purpose; for there is an increased discharge of bile whenever it is administered." Mercurials at least cause an increased discharge of bile from the intestines of a healthy person, and induce its discharge when it has been diminished or wholly stopped; so it is very natural to suppose that it actually increases the secretion.

From what has been stated in this thesis the reader already knows mercury is a powerful antiphlogistic. Inflammation either increases the fibrin of the blood or is itself caused by that increase; therefore, one would naturally infer, as mercury defibrinates the blood, it is the remedy for inflammatory diseases, and clinical experience substantiates this theory. Especially is this the case in inflammation of serous membranes.

Peritonitis, when mercurial treatment is resorted to in its early stages, is effectually subdued. Although in this disease salivation is difficult, yet the treatment should be persevered in until it is produced.

In the chronic, rheumatic, and sub-acute forms of *pericarditis*, and in all forms of *endocarditis*, mercury should be prescribed.

Pleuritis of a sub-acute or chronic character is generally treated with mercurials.

Acute *hepatitis* and *pneumonitis* are sometimes treated with mercury, but the advantage thereby is questionable.

Goitre and *chronic enlargement* of the *spleen* have been cured almost invariably when the biniodide of mercury has been painted over the enlarged parts.

Of all inflammations, that of the *iris* gives the most marked *visible* evidence of the antiphlogistic power of mercury. In *iritis* the exudation of lymph is readily detected by inspection; and as the systemic effect of the mercury begins to exhibit itself by *ptyalism*, the subsidence of the lymph may be easily perceived. Treatment in *iritis* is usually one or two grains of calomel, with one-fourth grain of opium, every six hours, until the secretion of saliva is considerably augmented. External applications may also be made. Not only in *iritis* is it judicious to combine opium with mercury, but in all diseases where it is desirable to produce the constitutional effects of the metal, as without the conjunction of the soporific, the mercury becomes a purgative. We also beg leave to say here, that

in all cases where mercurials are given, care should be taken to protect the patients from cold and moisture.

As an antisymphilitica, mercury has won his greatest honors. Besieged and ridiculed by practitioners of all ages, he nevertheless stands out to-day as *the* grand antagonist of modern leprosy, the attacks of his enemies only assisting to polish his armor and develop his power.

Notwithstanding my exalted opinion of this Balm of Gilead to the erring soul, I am strongly opposed to carrying its use to the extent of excessive ptyalism, like many of my homeopathic brethren (?) have done, as demonstrated by several of their patients coming to men who are physicians, not homeopaths, to be relieved of the terrors of hyper-salivation.

"But," asks an inquisitive reader, "what has that to do with mercury for syphilis?" As it is a question that requires deep thought, the writer will reserve his reply for another thesis.

Syphilis is, by almost all authorities, divided into three stages—viz., primary, secondary, and tertiary. Again, the primary is divided into two classes. If the chancre presents a soft, diffusive appearance, it is called a soft chancre or chancroid; if, on the other hand, it is circumscribed and hard, it is an indurated or Hunterian chancre. In the primary stage the rule is not to use mercury, let the chancre be soft or hard. If soft, the poison is said to pass out of the system spontaneously; and if hard, it is better to wait until some secondary symptoms appear. Contrary to this rule, I have seen cases of so-called chancroid result in constitutional syphilis, and am also confident that I have seen cases of the Hunterian class derive considerable benefit from the use of mercury in its primary stage. Therefore, it is certainly a safe plan to use mercurials *moderately* from the first, let the chancre be soft or hard; but mercury shows its greatest strength in subduing the *secondary* symptoms. A combination of mercury and iodide of potassium, during the *secondary* and *tertiary* stages, is often more efficacious than either alone. A favorite prescription in Long Island College Hospital, and one that is worthy of favoritism anywhere, is as follows: R Hydrargyri chloridum corrosivum, grs. ij; potassii iodidum, ʒss.; potassii chloras, ʒj; tinctura cinchonæ composita, aqua, aa., ʒiv. M. Sig. dessert-spoonful after each meal.

In the most radical forms of the *tertiary*—*i. e.*, periostitis, etc.—the iodide of potassium must be chiefly relied on; but in all other forms of the disease, it is mercury, mercury, mercury! Without it

the practitioner is like an actor without a play, a clergyman without the Bible, or a Redeemer, with the will but not the power; with it, his face may beam with the calm serenity of a mid-summer's morn, the confidence of a child, or the placid egotism of an Emerson.

As a sample of the change of opinion in regard to the importance of medicine and diseases, the following contrast is worthy of notice, viz: Many years ago the late Professor Dickson wrote a work to prove that "All diseases are varieties of ague; quinine cures all varieties of ague; therefore, quinine cures all diseases." On the other, Professor Gross, who occupies a chair in the same school Professor Dickson was connected with, lately said, that if he lived fifteen years longer he would prove that scrofula and tuberculosis are merely varieties of hereditary syphilis. *If* he does live fifteen years more, and *if* he does then prove what he thinks he will, then we can say that mercury cures all diseases with at least as much reason as Dr. Dickson had for writing that quinine was the great cure-all.

Art. 3.—Labor complicated with a Vaginal Tumor.

Reported by Dr. T. J. ADAMSON, Quincy, Ky.

September 17, 1874, was called to visit Mrs. B. I found her in labor, and was informed that the membrane had ruptured but a short time before my arrival. I immediately made an examination *per vaginum*. Upon attempting to introduce my index-finger through the os externum it came in contact with a solid body, which at first I mistook for the presenting part of the fetus; but, on making a more critical exploration, I found it to be a tumor of some kind, filling the entire aperture of the interior strait, and being attached to the posterior walls of the vagina from near the external os to the cervix uteri. It was with difficulty the finger could be introduced into the vaginal cavity and impossible to reach the cervix. Under existing circumstances it was impossible for me to form any satisfactory diagnosis of the nature of the tumor.

Upon making inquiry of my patient I found the trouble to be of years' standing; that she had been married eight years, and that this was her first conception; that at times the tumor had been

very painful, and although she had been under the treatment of many medical men, and "*suffered much from many physicians,*" none of them had ever examined the tumor by speculum or otherwise, or expressed their opinion as to the nature of the trouble! Finding I could elicit nothing from either the patient or her husband, that would cast any important light upon the past history of the case, or aid me in forming a correct diagnosis, and my patient seeming in no immediate peril, I concluded, for the time, to follow the example of my *illustrious predecessors*, to wait and test the powers of *vis medicatrix naturæ*.

After twenty-four hours had elapsed, and I finding no material changes in the case that would inspire hope, I had my friend, Dr. A. B. Jones, of Portsmouth, O., called as counsel, believing that the only ground there was for hope was in the Cæsarian operation. The doctor, after making a very careful examination, gave it as his opinion that my prognosis was correct, and the operation was the only alternative. But as the vital forces of our patient were still vigorous, we thought it would be admissible to defer the operation twenty-four hours longer, provided there should occur nothing to demand it at an earlier date.

At the terminus of this time, still finding no change but in the physical exhaustion of the patient, I dispatched a messenger again for my counsel; but before his arrival, by the force of strong uterine contractions, the tumor ruptured, and a quantity of pus was discharged. The vertex of the fetus immediately passed through the pelvic bones, and the labor terminated in the normal way, with safety to both mother and child.

This is only one of many cases to which I might refer, that have come under my own immediate observation, in a practice of thirty years, that have convinced me that operations are often instituted prematurely, and, I fear, sometimes unnecessarily; that in many cases much suffering might be obviated by permitting nature to perform her own work in her own time.

Art. 4.—Case in Practice.

By F. H. GODFREY, M.D., Belle Flower, Ill.

March 10, 1875. David Burns, æt. 27; white; farmer. While cutting wood six miles from home, and in attempting to chop off a small limb, holding the ax in the right hand and the stick with

his left, and in attempting to cut close to his hand, by some means unknown to me, he failed to hit the limb, and the ax descended on his wrist, severing the radial artery and inflicting a wound nearly an inch deep and probably two inches long, barely missing the ulnar artery. The blood immediately spurted out, he said, six or eight feet. He not having lost his presence of mind, at once called to his companion to tie a handkerchief around his arm, and which controlled the bleeding to a certain extent, but did not lessen the danger materially. He was immediately placed in a wagon and driven toward home, while the jolting of the wagon served to loosen the bandage, and bleeding would at once commence; and in this way he left a red ribbon of blood on the ground, from the starting until his arrival at home, as I stated, six miles.

A messenger was immediately dispatched for me; and on my arrival I found my patient sitting in a chair, while his forearm had been tied up with rags, one over another, to the thickness of two inches. Patient was looking quite pale, and thought he had lost half a gallon of blood. I immediately placed a compress, consisting of a large smooth-handled knife, over the brachial artery, and with a handkerchief and stick soon succeeded in making a field tourniquet, which almost completely checked the hemorrhage. I then unbound the wound, and discovered what I have described above. After washing with cool water, and cleaning out the wound, I proceeded to search for the divided artery, which was not easy to find. After patiently working for some time, I at last succeeded in grasping the artery, and proceeded to ligate, which was extremely hard to do, as the vessel had retracted so much. Thinking that all was now secure I somewhat loosened my tourniquet, as the arm was now becoming blue and cold, and unfortunately let on the steam too fast, and away went the blood almost as fast as ever. Pressing my thumb over the bleeding vessel above the wound, I tried the efficacy of liquor ferri perchloridi by soaking compresses with it, and holding for some time against the bleeding orifice, as recommended by Billroth, page 37; but after patiently working in this manner for some time, with no apparent effect, I then threw aside the bottle, and grasping my forceps, laid hold of the artery, tissues and all, and by several vigorous twists, succeeded in arresting the bleeding. I then proceeded to sew up the wound; and after dressing, and applying a splint to the forearm to steady the wrist, placing the patient in bed, and loosening the tourniquet, made him as comfortable as possible, and

started for home, expecting to be called to his assistance all the time, and determined next time to ligate the brachial artery, but was disappointed, as no messenger came.

March 12. Visited Mr. B., in company with my partner, Dr. Conkling, and found him in good condition and feeling pretty well. Took off bandages, and found that there had been some hemorrhage, as the cloths were soaked with dried blood; otherwise doing well. Redressed the wound and left him to his fate.

March 29. Called at my office. Improving finely.

April 5. Called again, and reported himself well; and stated that two days before he had plowed his garden. Motion in wrist complete; but the first and second fingers of the hand feel somewhat numb and cold.

Would it have been better to have ligated the brachial artery at once, as recommended by some?

Art. 5.—A Case of Rape.

By CHARLES P. JUDKINS, M.D., Cincinnati, O.

On the 27th of January, 1875, I was requested by the health officer, Dr. J. J. Quinn, and Dr. Watson, of this city, to examine a little girl living in Charcoal Alley (a blind court inhabited by persons of the poorer class), for suspected venereal trouble. The history of the case, as gathered from the attending physician, Dr. Watson, was that the girl had been forcibly violated by a grown man, about sixteen days before, and that at his first visit, two days previous, he had detected symptoms that had excited his apprehensions as to some specific complications. On examination of the patient, Mary Snyder, 10 years of age, of Irish parentage, lymphatic temperament, revealed the following symptoms: Pulse, 137; respiration, 36; temperature, $101\frac{1}{2}$; tongue heavily coated with a tendency to dryness; complains bitterly of pain in lower portion of abdominal regions; on pressure, most marked in left iliac, though the pain and tenderness extends into the hypogastric and right iliac regions; tympanitic on percussion. The external genital organs are greatly swollen, and bathed in a free purulent discharge; on separating the *labia majora* and freeing them of the discharge, it was found that there was a slight rent at their point of union anteriorly, while posteriorly the laceration was about a quarter

of an inch in length, and of ragged appearance; on the inner and upper surface of the right labia was a well-defined, prominent and glistening point, about the size of a silver dime, covered with a tenacious grayish secretion beneath which at different points could be detected an ecchymosed condition, giving to the whole surface the appearance of a piece of dried, moldy beef, that had been recently wiped with a wet rag. The edges of this peculiar surface were well defined, raised (in fact the whole diseased point) above the surrounding tissue, and terminated abruptly; on palpation the circumference of the sore could be easily mapped out, and gave to the touch marked resistance. The glands of the groin were not perceptibly enlarged, though no very careful examination could be made on account of the great pain caused to the patient; the glands of the post-cervical region were not as yet affected, no eruptions on the body. From the symptoms presented, 1. The time that elapsed between the commission of the act and the appearance of the sore (over ten days); 2. The general outlines of the diseased surface; and 3. The marked induration imparted on palpation, I did not hesitate to pronounce this patient to be suffering with a true, indurated, specific chancre, and that constitutional evidences of the same would show themselves in the course of time (I am happy to state that the other two medical gentlemen agreed in the diagnosis). As to whether the vulvitis and vaginitis and attendant discharge was due to gonorrhœal infection or mechanical violence, I was unable to determine.

The prognosis of the case was exceedingly unfavorable. The patient was ordered quinine and Dover's powder internally, strong solution of hops and vinegar hot to abdomen, and poultices of slippery elm to genital organs, beef tea and wine. By the third day extensive sloughing at the seat of the chancre had set in, which, before it terminated, eat away fully one-half of labia majoria of that side. On the 4th of February, the glands in posterior cervical region were enlarged and indurated; the general condition of patient about the same as at first visit: at no time while I was seeing the case, was anything in the shape of specific treatment administered; free stimulation; the substitution of morphia for pulvis doveri, and the use of a solution of tartrate of iron and potash to the sore were the only means used in the case different than at first. February 16th, the sore is beginning to heal at edges; general condition of patient improved; glands of neck still enlarged.

February 26th. Yesterday and to-day the patient has suffered

with a marked increase in frequency of pulse and heat of skin, and complains bitterly of soreness of mouth and throat; an examination reveals dryness of upper surface of tongue, and on both sides of it grayish adherent spots, with spots of a similar character on the roof of the mouth, and back part and sides of throat, evidently mucous patches; for this she was ordered a wash of potass chlorat, and carbolic acid and glycerine. The seat of the original sore has almost entirely healed. On the anterior portion of abdomen and thorax there could also be detected some half dozen spots having all the characteristic signs of maculated roseolæ. March 5th, I discontinued visiting patient, as she was much improved; but I am informed by Dr. Watson, that he was obliged to administer to her soon afterward, some potass iodide for a periostitis that set up on the right frontal bone accompanied by nocturnal pains. Such in brief is the history of a case of constitutional syphilis, the symptoms of which ran a rapid course, but were still well marked and positive, and left no doubt as to diagnosis, and brings us to the next step in the history of the case.

John Sullivan, the man who committed the rape, is about nineteen years of age; Irish; six months a resident of this country; laborer; good physical development; about five and a half feet in height; of a lymphatic temperament. On the first day of February an examination of him was made in the county jail, to discover if any symptoms could be detected that would confirm the diagnosis made in the case of Mary Snyder. On exposing the external genitals, it was found that they were well developed, the prepuce enveloping the glans so tightly that it could not be retracted. From beneath the prepuce there was a semi-purulent discharge, somewhat profuse. On account of the phymosis I was obliged to make an examination through the prepuce, and detected, on palpation, a markedly indurated spot behind the corona glandis, and on the left side of the organ. This spot was about the size of a pea, hard and resisting. Extending along the side of the body of penis, the lymphatic vessels were enlarged, indurated, and painless. The glands in inguinal regions of both sides, some three or four in number, were enlarged and indurated. The glands in the post-cervical region were also enlarged and indurated. No eruption on the scalp or on the body; no sore throat.

With these symptom present, I did not hesitate to pronounce the prisoner suffering from constitutional syphilis, and Dr. Watson, who was present, agreed in the diagnosis. The prisoner admitted,

on trial, that he raped the girl, but denied that he was diseased. Dr. Watson and myself testified that, from the symptoms present in both cases, that the prisoner was undoubtedly suffering from syphilis, and that, in our opinion, he had infected the girl with that disease.

Drs. D. D. Bramble, Tibballs, and Underhill testified as follows:

Dr. Bramble stated, that he had examined the prisoner on the 2d of February, and detected no symptoms except phymosis and a slight discharge from beneath the prepuce, for which he ordered (Dr. Bramble being jail physician), a syringe and soap and water injection; that afterward he examined him, when the prisoner could retract the prepuce, and no evidences of a sore could be detected; no induration of glands in groin or in post-cervical region; in short, that he was not diseased at all.

Drs. Tibballs and Underhill testified that they had examined the prisoner on the 25th and 26th of February, and that they were unable to detect any evidences of syphilis; one of the gentlemen going so far, in his written statement, as to say that this man *never had been diseased*.

The judge sentenced the prisoner to six years in the penitentiary, thereby implying his doubt as to the diseased condition of the man.

A few days after the trial (March 30), Drs. Bramble, Watson, and myself made another examination of John Sullivan, when he displayed the following symptoms: The prepuce could be retracted, and a sore was detected behind the corona glandis; and by the side of frenum, on left side, a sore almost healed, but indurated and parchment like on palpation; the glands of groin enlarged and indurated, and two well-marked indurated glands—one on either side—on the back of the neck. On anterior portion of thorax and abdomen there were from thirty to forty brownish-colored spots, furfuracious, non-purigenious, about the size of a three-cent piece, not disappearing entirely on pressure. In the right side of throat, between the anterior and posterior pillars of fauces, there was an inflamed spot, covered with a tenaceous, grayish secretion.

I pointed these symptoms out to Dr. Bramble, and asked him if he was not convinced. He admitted the existence of them, but said that he was not.

At his request we agreed to submit the case to a committee of two medical gentlemen: Drs. W. R. Woodward and Carson.

Dr. Carson declined to serve on the committee.

Dr. Woodward made an examination on the 3d of April, and gave it as his written opinion that he, John Sullivan, was at that time suffering with constitutional syphilis.

Such being the history of these two cases, I submit it to the medical fraternity—Was John Sullivan imprisoned for a crime he never committed (for if he is not diseased he did not rape this girl, his statement to the contrary notwithstanding), or is Mary Snyder a prostitute?

Art. 6.—Oleate of Mercury in Syphilis.

By JNO. D. W. ROBERTS, M.D., Cincinnati, O.

It has been settled by the syphilographers of Europe and America, that mercurials are among the leading curative agents, but the question as to the best form and method for their administration remains to be settled.

We are indebted to Dr. Berkley Hill, of London, for the discovery of oleic acid, as the best menstruum to suspend some of the compounds of mercury. This consists essentially of a solution of the oxide of mercury in oleic acid, unlike mercurial ointment, which is an unscientific mixture, very dirty and disagreeable to the patient, absorbed slowly, and requiring much time to make a successful application.

While the oleate of mercury is easily absorbed, cleanly and very economical, its penetrating power is about five times greater than any other preparation as made in this city, the strengths are indicated by the percentage of the oxide of mercury which they contain. The five and ten per cent. are about the consistence of *cream* and the twenty per cent. is an opaque ointment of a yellowish color, melting readily at the normal temperature of the body. All these preparations can easily be applied with a Cammel's hair pencil,

The society then went into executive session and elected to and are absorbed in a few minutes, giving the patient but little inconvenience, and the physician no fear of stomatitis, or diarrhea. I have used oleate of mercury in the treatment of syphilis for nearly two years, and marked carefully its effects in comparison with the internal use of mercury. So far, eighteen cases have been treated by me, with the oleate. Eight were treated locally for primary

syphilis. In all of these cases, I waited for secondary symptoms to manifest themselves, before I commenced constitutional treatment. Seven returned, suffering with erythematous syphilides; they were placed on the oleate of mercury inunction; the eight had no eruption of the skin, but suffered severely with ulceration of the tonsils; the fauces, and other parts of the throat were swollen, sore, and stripped of their natural epithelium. In this case the oleate was applied externally, twice a day, to the neck. And as the pain in deglutition was very great, one grain of morphia was added to each dram of the oleate. Relief was experienced within a very short period. The mercury being applied so near the seat of the disease, and acting upon the inflamed parts and relieving the irritation, I was much surprised to find in a few days that the inflammation had left the throat, and the ulcers assumed healthy action.

The ninth case was one of twenty years' standing. The patient assured me that he had never taken a mercurial course of treatment, but had been in the habit of taking iodide of potassium in large doses daily for some ten years, with the idea of curing the disease. He had been to the Hot Springs of Arkansas. He received but temporary relief. He informed me that he never was relieved of the pain which at night became unbearable. He was very much emaciated and suffering with syphilitic chlorosis, and in the words of M. Ricord, the iodides had so impoverished his blood that there was little left but water, and as the symptoms of iodism were fully present, with appetite almost gone. On the right leg there were two large nodes which had suppurated, leaving the bone without covering. The joint of the same knee was swollen to double its normal size, and threatening to suppurate, which in fact had taken place some years ago. The case looked so hopeless, that I requested a consultation, but the patient had made up his mind that his only chance was to have the leg amputated, as he had tried almost everything before I saw him. I was at a loss to know what to do, as the use of mercury in this case was contraindicated. My faith being in the mercurials, and having no other remedy that would be likely to do good, I placed him on the use of the oleate of mercury and morphia. The iodides were laid aside for the first time in ten years, and the following prescription substituted:

R. Iodoform gr. iii.

Pulv. ferri gr. tss.

M. Ext gentian gr. ss. One, three times a day.

The oleate was applied in large quantities to the knee, and both leg and knee bandaged. In a few days the pain was much relieved, and as the system came under the effects of the mercury it decreased. After five days the oleate was discontinued (for a short time, and afterward twice a week), as the system was then fully under the effects of the mercury. The œdema had left the knee, as well as the pain, and since then, now eighteen months ago, he has experienced no return of pain, and is now in good health. Three other cases were suffering with nocturnal pains, and had used iodide potassium for some years; two had large ulcers situated on the leg. Half a dram of the oleate was applied daily. The ulcers were dressed with mercurial ointment, spread upon sheepskin and a bandage applied to keep it in position. In the majority of cases it is not necessary to remove the plaster more than *twice a week*.

In none of these had I any trouble in arresting any bad symptom, neither have I experienced any necessity for using other treatment. If necessary the oleate can be combined with tonics frequently, with great benefit.

Dr. Vajda, of the Vienna General Hospital, who is at present employing this preparation in the Syphilitic Wards, has published his experience in Schmidt's Jahrbücher. He follows the rule laid down by Professor Sigmund in reference to mercurial inunction. So far fifty cases have been under that treatment—thirty-seven were suffering with syphilitic erythema, and fourteen were afflicted with papulæ syphilides, and the remaining two had commenced mercurial ointment treatment. The result was as follows: In the erythematous syphilides the eruption disappeared in about twenty-one days, and the average number of inunctions made was eighteen. The quantity about half a drachm to each patient daily. Martini has employed the oleate in forty cases, and had but five relapses. In Vajda fifty-one cases treated by the oleate, three only returned with a renewed attack in the form of mucous patches. Such results can not possibly be claimed for the use of mercury per orem. I have, in a number of cases, treated syphilitic skin diseases, by the use of the mercurial vapor-bath with great satisfaction to myself, and to the great relief of my patients. Now, as a remedy of such importance to the profession has been placed within our hands, I hope soon to have the opinion of others as to its value for syphilis. M. Ricord admits that inunction, if the operation were not so disagreeable, would be the best treatment.

Certainly M. Ricord will insist upon a preparation with all the advantages and none of the disadvantages of mercurial ointment. The oleate can also be so exhibited with oil of roses or any other perfume, that the offensive smell of mercurial ointment is obviated. This important question has been discussed by the Hunterian Society of London, and Dr. Hutchinson has stated that mercury, if rightly understood, is an antidote to the poison of syphilis. He says that the mercurial vapor-bath seemed to him to have some special advantage over all other forms of introducing mercury. Dr. Liemen, of Aix-la-Chapelle, thinks that mercurial inunctions far superior to any other form of administering the drug, and Dr. Vajda claims a cure after some eighteen or twenty applications. I have kept no account of the number of applications necessary, being of the same opinion as Dr. Alfred Fournier, of Paris, who advocates a two year's course of mercury in cases of syphilis is necessary without exception, with intervals of non-administration every month or two. I am in the habit of recommending my patients to apply the oleate every day for two months and afterward every four or five days for six months, and then once a week for a year. My experience leads me to believe that this is preferable to internal treatment.

Tincture of Arnica a Dangerous Application.—Dr. James C. White has an article in the *Boston Med. and Surg. Journal*, for January 21, 1875, on the poisonous action of tincture of arnica on the skin. He relates three cases, where its use as a lotion for bruises occasioned severe attacks of acute eczema. Dr. White is inclined to believe that such results are more common than is generally known. The use of arnica as a household remedy is exceedingly extensive, and the reason that the poisonous effects often produced upon the skin do not lead to its disuse, is that the true nature of these effects are seldom recognized, but are attributed to the original injury for which the arnica is applied. Whatever beneficial results may follow the use of that tincture Dr. White would ascribe wholly to the alcohol. Hebra has long ago entered a protest against the use of this supposed remedy, and its irritant properties are described by Tilbury Fox. Dr. White thinks the profession should cease to accord to so useless and dangerous a drug a confidence to which it is in no way entitled.

Translations.

REVIEW OF FOREIGN JOURNALS.

By HENRY ILLOWY, M.D.

I.

TANNIN—ITS USE IN THE CORYZA OF ADULTS AND INFANTS.

It has been often said that, though we are continually proclaiming the great progress made in medicine, we have not as yet, from the days of Hippocrates up to the present day, discovered a remedy for coryza.

They who thus reproach us forget to add, that they are not willing to submit to any hygienic measures that may be rationally indicated; but demand a remedy, an instant cure that may be used without any inconvenience—even while traveling.

Even the most noted quacks and charlatans, and vendors of infallible specifics, have never proposed anything but palliatives, some form of ammonia or iodine, and this always in fluid form, and thus very inconvenient for use; in fact, the inconvenience of their use being greater than the benefit derived therefrom.

We, also, who do not change our habits or interrupt our business for a simple coryza, have every time, when so afflicted, put the question on practical ground by seeking, not a quick cure—something that would cause the trouble to disappear instantaneously, a sovereign specific—but something that would lessen the principal inconveniences arising therefrom, and thus render the attack bearable.

This is how we accomplish our object. The principal symptoms of coryza are congestion of the mucous membrane of the nasal cavities, severe frontal headache, heat in the superior portion of the face, somnolence, and dryness of the mouth and throat—the more pronounced that the swelling of the mucous membrane completely occludes the nasal cavities, and prevents the ingress of air by this passage and compels a constant respiration by the mouth.

It is therefore evident that if we could provoke an energetic contraction of the mucous membrane, diminishing its volume, we should accomplish our object. In fact, as soon as the air finds a

free passage through the nasal cavities, the frontal headache and the lachrymation disappear, and with them the dryness of the mouth, which can now be kept closed. And more, the mucous membrane once expressed like a sponge, renders easy the expulsion of fluid mucosities that before could not be detached by the most violent efforts.

These results we have uniformly obtained by the use of tannin, mixed with an inert powder, according to the following formula:

R Tannin, 0.05 gm.

Pulv. iridis.

Pulv. althea., āā 1 gm.

Tinct. vanill., iv gtta. M.

To be taken in small pinches three or four times per day, or more, if the necessity for it be felt.

Coryza, which in the adult presents inconveniences only, and those easily endured, becomes a grave affection when it attacks the nursing. Here, as is well known to all physicians, the occlusion of the nasal cavities may directly menace the life of the infant, in rendering impossible its efforts at suction. Prompt action is necessary; it is, however, well known that up to now all our means have proved inefficacious. This is our method of conjuring away the danger.

Having had the following ointment prepared—

R Tannin, 0.05 gm.

Axungia, 5 gm.

Tinct. vanill., 5 gtta.

—we roll between the thumb and index finger a small square of paper into the shape of a solid cylinder, but so slightly rigid that it will bend at the slightest lateral movement that the child may make when introducing it into the nasal passage; having anointed the outer surface of the cylinder, you introduce it sufficiently deep into the nasal cavities.

We in this manner very frequently provoke three or four very salutary sternutations, and always the effect uniformly produced in the adult—viz., the free circulation of air through the nasal passages in consequence of the contraction of the mucous membrane.

The parents are always astonished at the rapidity with which the infant returns to the breast, thanks to the success of this little maneuver.

Because we are convinced that we have snatched more than one infant from imminent danger that we insist upon this procedure,

which proves to us that, in the treatment of infants especially, it is the little things that produce the best results.—DR. D., in "*La Tribune Medicale*."

II.

LACTEAL ENGORGEMENTS PRECURSORS OF MAMMARY ABSCESS—A MEASURE, SIMPLE AND RAPID, TO CAUSE THEIR DISAPPEARANCE.

Engorgement of the mammary glands, *acini et tubes*, is of very frequent occurrence in women lately accouched, and especially in primiparæ. The bad shape of a nipple that the infant can not seize, fissures of the breast occasioning pain—so much so that at times the mother will avoid nursing the infant on that side—an indisposition of the infant to nurse, are among the most frequent causes determining engorgements. The breast becomes painful; very soon thereafter there is elevation of its temperature appreciable by the touch. At the seat of pain, either in the midst of healthy glandular tissue or at its periphery, a greater or less extent of this indurated tissue, generally lenticular in shape, can be felt. The swelling augments very rapidly in size, and sometime several indurated points coming in juxtaposition will give a knotty and irregular feel to the touch.

After several days the cellular tissue that surrounds the glandulæ acini becomes inflamed in its turn, the pain becomes lancinating, the patient has rigors, and suppuration is established.

The medicinal means employed since all time against this so painful affection, that compromises the health of both mother and child, only give mediocre results.

What physician has not felt hurt in his sensibility and amour-propre, in not being able to offer to the supplications of the mother, and the cries of the famished infant but the hackneyed prescriptions, "fomentations, cataplasms, and resolving unguents?"

Here is a measure, very simple, but one that has *always* succeeded in my hands in causing instantaneous disappearance of the engorgement, whenever employed at the outset of the disease.

It is this: Prolonged friction in every direction, made with the hands, and kneading of the indurated parts; exercising a moderate pressure, varying according to the degree of sensibility and the degree of resistance offered by the diseased part. In the first twelve hours, five to ten minutes will suffice to cause the disappearance of an induration of the size of a small hen's egg. Later on, the engorgement offers greater resistance; it will require several sittings,

at intervals of ten minutes; the frictions are more painful and should also be more energetic.

Employed very late, it has proved ineffectual. Still, it seems to me to offer some advantages, despite the great pain that it would now occasion. In unloading in a great measure the gland, it prevents the inflammation from spreading to so great an extent in the cellular tissue, and so limit the dimensions of the abscess.

Very often it is necessary to repeat the frictions several times, the engorgement having a tendency to relapse; it is therefore necessary to watch it and act on the instant. This, however, having been duly explained, may be confided to the patient or her husband.

During these manipulations a certain quantity of milk always escapes. At first, milk very thick (especially if the engorgement be of the second or third day), and of yellowish, or at times grayish appearance, then less thick, and lastly, when the gland has been restored to almost its natural suppleness, natural milk.

The patient should not be left until the indurated portion is restored to the degree of suppleness of the rest of the gland.—DR. A. C., *La Trib. Medic.*

III.

CODEINE.

Dr. H. Emminghaus (*Jahrb. f. Kinderheilk*) used codeine with excellent effect in a gastric affection of a young girl æt. 12, in whose case the main complaint was a constant feeling of gnawing hunger, which was only temporarily assuaged by food. There were also symptoms of commencing pulmonary phthisis. Codeine, in doses of one milligr., three times a day, cured the bulimia completely.

Dr. E. believes that he can recommend this remedy for all cases in which bulimia may present, as a visceral neuralgia, a state of irritation. The irritation may be either a chemical or mechanical one.

CHLORAL—CROTON CHLORAL.

For the treatment of the different neuralgias, and in diverse locations, Dr. Lennox Browne (*British Medic. Jour.*, March 7, 1874), recommends penciling the afflicted parts with a mixture consisting of equal parts of chloral hydrate and spirit camphor. He has always seen good results from this treatment; at times almost immediate upon the application. He dwells more particularly upon

the excellent results obtained from this treatment in neuralgia of the larynx, and in spasmodic cough of nervous or hysterical character, as also in adontalgia.

C. M. Durant reports a case of facial neuralgia in which croton chloral was administered, one grain three times a day. After the first two days there was great improvement; after three days, complete freedom from pain. In another and similar case it proved ineffectual.

Louis Lewis used it (croton chlor.) in three cases of neuralgic dysmenorrhea with very good success. He gave it in doses of grs. v, twice a day. After two or three doses had been taken, there was complete relief from pain in all cases.

CARBOLIC ACID, HYPODERMIC INJECTION OF.

Dr. Hirschberg, in Posen (*Berlin. Kl. Wochenschr.*), has used with remarkable success the hypodermic injection of carbolic acid, first recommended by Aufrecht (*Jahrb. clxiv*, p. 147), for the treatment of erysipelas, in a case in which, from a punctured wound at the elbow-joint, the erysipelas spread to the middle of the (upper) arm. After the first injection a syringeful of a two-per-cent. solution, the erysipelas disappeared as far as the deep red edges of the wound. In the three days following, five more injections were given. After five days the wound was almost completely without suppuration, which, without the injections, could not possibly have been avoided.—*Schmidt's Jahrb.*, 1874, No. 12.

Camphor Water.—The simple camphor water, *aqua camphora*, of the shops is one of the best and cheapest washes for the teeth and mouth. Its deterative power is great, leaving the mouth and gums very clean and sweet. It is fatal to parasites, and therefore discouraging to tartar and decay. It has also a healing influence upon aphthous sores (canker) of the mouth and throat. It lessens sensibility of the teeth, and tends to resolve the small abscesses known as gum-boils. We recommend it as a standard article of the toilet.—*C.*, in *Boston Journal of Chemistry*.

Proceedings of Societies.

AMERICAN MEDICAL ASSOCIATION.

The twenty-sixth annual session will be held in the city of Louisville, Ky., on Tuesday, May 4, 1875, at 11 A. M.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by representation in their respective State Societies, and from the Medical Department of the Army and Navy of the United States."

"Each State, County, and District Medical Society entitled to representation shall have the privilege of sending to the association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the code of ethics of the association."

"The chairmen of the several sections shall prepare and read in the general sessions of the association, papers on the advances and discoveries of the past year in the branches of science included in their respective sections. . . ."—*By-Laws, Art. II., Sec. 4.*

SECTIONS.

Practice of Medicine, Materia Medica, and Physiology.—Dr. Austin Flint, Sen., New York, N. Y., *Chairman*; Dr. J. K. Bartlett, Milwaukee, Wis., *Secretary*.

Special Committees appointed to report to this Section:

On Meteorological Observations.—Dr. J. M. Toner, D. C., *Chairman*; Dr. J. J. Woodward, U. S. A.; Dr. E. Lloyd Howard, Md.

On Clinical Observations.—Dr. N. S. Davis, Ill., *Chairman*; Dr. H. A. Johnson, Ill.; Dr. J. B. Johnson, Mo.

Obstetrics and Diseases of Women and Children.—Dr. W. H. Byford, Chicago, Ill., *Chairman*; Dr. S. C. Busey, Washington, D. C., *Secretary*.

Special Committees to prepare business for this Section :

Dr. M. A. Pallen, N. Y., *Chairman* ; Dr. L. F. Warner, Mass. ;
Dr. J. K. Bartlett, Wis.

Committees appointed by the above :

On Unusual Fetal Presentation.—Dr. J. A. Ochterloney, Ky.

On Retroversion of the Uterus in the first five months of Pregnancy.—
Dr. Heaton, Mich.

On the Connection of the Hepatic Circulation with Uterine Hyperæmias, Fluxions, Congestions, and Inflammations.—Dr. L. F. Warner, Mass.

On the Relation of Menstruation during Lactation.—Dr. S. C. Busey, D. C.

Surgery and Anatomy.—Dr. E. M. Moore, Rochester, N. Y., *Chairman* ; Dr. T. S. Latimer, Baltimore, Md., *Secretary*.

Committee to report to this Section :

On the Treatment of Fractures.—Dr. Lewis Sayre, New York, *Chairman*.

On Medical Jurisprudence, Chemistry, and Psychology.—Dr. Jerome Cochran, Mobile, Ala., *Chairman* ; Dr. G. A. Moses, St. Louis, Mo., *Secretary*.

State Medicine and Public Hygiene.—Dr. H. I. Bowditch, Boston, Mass., *Chairman* ; Dr. H. B. Baker, Lansing, Mich., *Secretary*.

Committees to report to this Section :

On Ventilation of Dwellings, School-houses, and other Public Buildings.—Dr. R. C. Kedzie, Mich., *Chairman* ; Dr. A. B. Stuart, Minn. ; Dr. R. J. O'Sullivan, N. Y.

On Form of Bill to establish a National Department of Public Health at Washington.—Dr. H. B. Baker, Mich., *Chairman* ; Dr. H. A. Johnson, Ill. ; Dr. J. M. Toner, D. C.

On what Legislative Action, if any, can be taken to enforce by Law an Examination of all Persons who enter upon the Practice of Medicine and Surgery, by a State Board of Medical Examiners.—Dr. Foster Pratt, Mich., *Chairman* ; Dr. S. G. Armor, N. Y. ; Dr. D. W. Yandell, Ky.

“Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the secretary to whom such papers are sent, to examine them with care, and, with the advice of the chairman of his section, to determine the time and

order of their presentation, and give due notice of the same. . . ."
 —*By-Laws, Art. II., Sec. 5.*

The following Committees are expected to report :

On Cultivation of the Cinchona Tree.—Dr. L. J. Deal, Pennsylvania, *Chairman.*

On some Diseases peculiar to Colorado.—Dr. John Elsner, Colorado, *Chairman.*

On American as compared with Foreign Winter Cures.—Dr. H. R. Storer, Massachusetts, *Chairman.*

On Railroad Injuries.—Dr. W. F. Peek, Iowa, *Chairman.*

On Proper Legislation to Prevent the Spread of Syphilis.—Dr. S. D. Gross, Penn., *Chairman.*

On the Use of Pessaries.—Dr. John Morris, Md., *Chairman.*

On Cystic Degeneration of the Kidneys.—Dr. John A. Ochterloney, Ky., *Chairman.*

On the Diseases of Minnesota and the Northwest.—Dr. D. W. Hand, Minn., *Chairman.*

On Prize Essays.—Dr. John Davies Jackson, Ky., *Chairman.*

On Necrology.—Dr. S. C. Chew, Md., *Chairman.*

On Rank of Medical Department of the Army.—Dr. J. M. Toner, D. C., *Chairman.*

On International Medical Association.—Dr. J. M. Toner, D. C., *Chairman.*

On Memorial on Dr. Henry Miller, deceased.—Dr. S. D. Gross, Penn., *Chairman.*

On Memorial on Dr. Geo. Mendenhall, deceased.—Dr. J. A. Murphy, Ohio, *Chairman.*

The following amendments to the plan of organization are to be acted upon :

By Dr. H. B. Baker, Michigan : "The officers of the several sections shall be nominated by the section in and for which said officers are to serve."

By Dr. Adams Jewett, Ohio : "The permanent members shall consist of all those who have served in the capacity of delegates, and of such other members as shall have received the appointment by unanimous vote, and of all others who, being members in good standing of any State or local medical society entitled to representation in this body, shall, after being vouched for by at least three members, be elected to membership by a vote of three-fourths of the delegates in attendance, and shall continue such so long as they remain in good standing in the body of which they were

members when elected to membership in this association, and comply with the requirements of its by-laws."

Secretaries of all State Medical Societies that have adopted the code of ethics are respectfully requested to forward to the undersigned a complete list of the officers, with their post-office addresses, of those county and district medical societies entitled to representation in their respective bodies. This is the only guide for the Committee of Arrangements in determining as to the reception of delegates. It will also enable the permanent secretary to present a correct report of the medical organizations in fellowship with the association.

WM. B. ATKINSON, M.D., *Permanent Secretary.*

CINCINNATI ACADEMY OF MEDICINE.

March 15, 1875.

The President announced the following as the list of officers, standing committees, and sections for the year 1875 :

Officers.—President—D. H. Jessup, M.D.; First Vice-President—C. S. Muscroft, M.D.; Second Vice-President—A. Hoeltge, M.D.; Recording Secretary—Jas. G. Hyndman, M.D.; Corresponding Secretary—Geo. B. Orr, M.D.; Treasurer—B. Stanton, M.D.; Librarian—Samuel Nickles, M.D.; Trustees—A. Rosenfeld, M.D.; John Ludlow, M.D.; and W. W. Henderson, M.D.

STANDING COMMITTEES.

Admissions.—Drs. Geo. B. Orr, Julius Wise, J. C. McMechan.

Ethics.—Drs. J. H. Buckner, W. R. Woodward, A. Hoeltge.

Publications.—Drs. P. S. Conner, Geo. E. Walton, A. L. Carrick.

Executive.—Drs. M. B. Wright, Geo. Holdt, J. J. Quinn.

Advisory Committee.—Drs. W. W. Dawson, C. S. Muscroft, B. Stanton.

SECTIONS.

Physiology and Hygiene.—Drs. Whittaker, Quinn, Steves, Sittle, Wade, Thompson, Davy, Fogel, Hoeltge.

Pathology and Morbid Anatomy.—Drs. Longworth, Bramble, Gobrecht, F. A. Anderson, J. T. Wise, Schwagmeyer, Culbertson, Cilley, Brent.

Materia Medica and New Remedies.—Drs. Carrick, Nickles,

Temple, Woodward, Walton, Schmidt, Cassatt, Bettman, Bender, W. B. Davis.

Forensic Medicine and Toxicology.—Drs. Clark, Barrows, Schneider, Dandridge, Phythian, King, W. T. Brown, White, Manfred, Webb.

Skin Diseases.—Drs. Juler, C. O. Wright, Riffe, A. M. Brown, Foster, Fishbain, Barrows, Isham.

Diseases of the Nervous System.—Drs. Holdt, Bartholow, Henderson, Wm. Judkins, Norton, Stanton, Vattier, Klein.

Venereal Diseases.—Drs. Underhill, Stich, O. E. Davis, Young, Reed, Stark, Haile, Foertmeyer, Graff.

Ophthalmology and Otology.—Drs. Seely, Williams, Buckner, Aub, Ayres, Marcus, Dunlap, Schmuck.

Diseases of the Abdomen.—Drs. Hadlock, Heighway, Maley, Gerwe, Hyndman, Jones, Groesbeck, Julius Wise, C. A. Miller.

Diseases of the Thorax.—Drs. Graham, Kramer, Logan, Baum, Mackoy, John Davis, Wenning, Langenbeck.

Prevalent Diseases.—Drs. Quinn, Bigney, Goodin, Goddard, Raschig, Murray, Colter, Zipperlin, Kellar, Illowy, Hettlich.

Zymotic and Blood Diseases.—Drs. Nedemeyer, Mosenmeyer, Drake, Querner, Keck, Hosmer, Greene, Goode, Clendenin.

Obstetrics and Diseases of Women and Children.—Drs. McMechan, Reamy, Miles, Palmer, Tate, M. B. Wright, Cleveland, Taylor, Trush, Ludlow, Rosenfeld.

Surgery.—Drs. Muscroft, Dawson, Mussey, Wood, Young, Conner, Bramble, Orr, B. F. Miller, Thomas, Chas. Anderson.

THE CINCINNATI MEDICAL SOCIETY.

Society met March 9, 1875—the vice-president, Dr. Taylor, in the chair.

Dr. Carson presented some patients for inspection presenting different forms of paralytic disease.

CASE I. W. F., of average size, good muscular development, aged 34; born in Ireland, single, gardener. Mother living, and in good health. His father suffered very much with neuralgia. Patient does not know the cause of his father's death. Patient has never been sick much. When six years old he fell a distance of

twenty-five feet into a stone quarry, bruising himself severely. Since then his right shoulder has always drooped. Had gonorrhea fifteen years ago. Never had a venereal sore. Fourteen years ago he fell down stairs, striking in a sitting position on a step. Could not see for a short time after the fall. Served three and a half years in the army. Was taken prisoner, starved, and badly treated generally for four months, in 1862. Received a slight flesh wound across the scapula at Crab Orchard, Ky. Never lost a day on account of this wound. About eighteen months ago, while working at St. Luke's, he got his clothing wet frequently, and sometimes let them dry on his body. One year ago he began to be troubled with pain in his right leg, located principally in the right knee and along the course and distribution of the great sciatic nerve. There is now want of power in both limbs, more marked in the right. Co-ordinating power about the same in both limbs. Walks with a staggering gait; toe of the right foot drags at every step. Very slight gritting on pressure over the tibiæ, more marked over the right. Æsthesiometer gives a negative result, his answers being variable. Reflex sensibility marked on left side. Ability to stand in the upright position, with the feet together and eyes shut, fair. In walking, the eyes are directed forward instead of downward. There is no account of double vision. Thinks his eyesight has been failing lately. Muscular movements of eyeballs good, as it also is of face and arms. Examination of eyes showed a degree of optic neuritis to exist in both eyes, more advanced in the left eye—left pupil larger than right. Hearing good. Protrudes the tongue in a straight line. No spinal tenderness. He has a fair appetite. Bowels costive. Has no headache at present, and no history of any before. His attention was first attracted to the disease by the pain and weakness about right knee, and tendency to stumble with right foot.

CASE II. B., aged 31. History good, so far as we know. Occupation, printer. Has enjoyed good health most of his life. Was in the army several years. Was wounded at Bermuda Hundred in right leg; ball not removed, but he has not suffered any inconvenience from its presence. Eighteen months ago he had paralysis of left arm, which lasted for ten days. Last August he found some difficulty in talking, which soon disappeared. In December it reappeared, and has remained to the present time. He has indistinctness of speech, tremulousness of lips and tongue

when protruded; pronounces the letters with distinctness, but slowly. There is some inequality of the pupils. No paralysis of extremities; no abnormal sensations. Has complained lately of some frontal headache. He has spoken, in the last ten days, of some difficulty in remembering names. Dynamometric tests satisfactory; right hand natural, left feeble.

Dr. Mackenzie presented a case of locomotor ataxia of lower limbs. No lack of co-ordination of upper limbs. If the patient attempts to stand, with his feet together and his eyes closed, he totters and would fall, owing to the want of co-ordination. He has been under treatment for three and a half weeks; is taking pepsin and muriatic acid, under which he has improved, though he now totters when walking; can not walk with his eyes closed. This condition has existed four or five months. He has severe muscular pain—a symptom which these patients exhibit.

Dr. Carson said he presented these cases because the subject of general paralysis had recently been before the society. In some former remarks he had spoken of the different aspects in which general paralysis was presented. Wilks, of London, had referred to the subject, and had presented cases which presented the characteristic mental phenomena, and others in which he believed the pathological process to be essentially the same, but without characteristic evidences of insanity.

In case No. 1, the manifestations of mental change were not so much developed as those of the paralytic order; and thus apparently, it comes within that class which Wilks refers to as belonging more to the province of the general or hospital practitioner than to the alienist physician. In this case, however, there is very decided change in the ordinary facial expression, showing a vacancy and immobility not belonging to this man, whom Dr. Carson had known before, and which, no doubt, constituted the visible evidences of degenerative changes progressing within the cerebrum. He has also a common feature of general paralysis—double optic neuritis—which, with other changes, has produced blindness of the left eye.

In case No. 2, the mental phenomena indicating disorder were some want of coherency in statements, loss of memory, and, as Dr. Holdt has observed in the case, a degree of complacency and satisfaction with his situation not warranted by the truth. He has some headache, and pain along the distribution of the fifth pair of nerves. The conspicuous objective phenomena were trem-

ulous tongue and lips, and difficult, indistinct, and hesitating speech, without paralysis of tongue or facial muscles. His gait is steady and fairly controlled; at any rate, in great contrast to that of the other cases. There have been serious events in his life well calculated to make a morbid impression upon the nervous system—such as active participation in the recent war, a divided opinion and service in his own family, confiscation of property, death of his nearest relatives since the war, and estrangement of family from political causes, continuing to this time. Besides these, the probable physical wear and tear implied in a prolonged military service, and a somewhat roving and irregular life, have no doubt contributed to the development of his present state. This man does not as yet show the special delusions of general paralysis, but there are incongruities which point to some of them.

Dr. Holdt, in his paper, discussed the morbid histology of progressive paralysis of the insane. It does not appear, from an examination of the subject, that that has been made out. Many of the changes in the ganglionic cells noted as found in general paralysis, are found in senile degeneration of the cerebral convolutions.

Another point of interest as to the nature of the changes going on, is the one relating to their irritative character. Some facts in case No. 2 lead to the conclusion that *Dr. Holdt* maintained in his paper, that the process is one of great resemblance to, if not identical with, that of inflammation. The temperature charts of this case show thirty observations. In fourteen, the range was from 99° to 101° ; only once as high as 101° . In sixteen, the range was from 98° to $98\frac{1}{2}^{\circ}$.

Dr. Holdt said that progressive paralysis of the insane attacks adults in good health and vigor. He thinks that in case No. 2 there are indications of great mental disturbance. The patient is not sufficiently awake to the serious nature of his disease. At times he jokes about his condition, talks of his family difficulties with levity, and freely to strangers. He claims that responsible positions have been tendered him, as chairmanship of congressional committees—positions he could not hold, not being a member of Congress. This *Dr. Holdt* thought indicative of the delirium of greatness. *Dr. Holdt* called attention to the difference in gait of those affected with progressive paralysis from those whose paralysis was dependent on spinal disease—the former drag the toe as the foot is advanced; the latter raise the foot so as to clear the ground, and place it down flatly, with no dragging motion. He

again referred to the differences, in the early stage, between the morbid condition in progressive paralysis of the insane and other forms of paralysis. In the later stages the morbid conditions may be identical.

Dr. Carson asked whether the changes in senile degeneration are not the same as in progressive paralysis of the insane.

Dr. Holdt. The results are the same, but the processes by which they occur are not the same. In senile degeneration will be found a state of fatty degeneration, but not the cells which indicate the proliferation of nucleoli. Progressive paralysis of the insane has occurred without any disease of the membranes being found. He doubts the correctness of the statement that the spinal cord is almost invariably involved. Cases are reported where no disease of the cord was found. Spinal disease may sometimes precede the progressive paralytic insanity. In these cases, however, symptoms of spinal disease precede the manifestations of the latter disease. Moreover, the presence of degenerative processes in the cord would not suffice to show that the affection has primarily, nor even simultaneously, involved the cord.

Dr. Holdt referred to the investigations of Schiff, instituted nearly twenty years ago, for the purpose of ascertaining the course of the posterior roots of the spinal nerves peripherically, and to test whether any changes were produced in the cord. By cutting the posterior roots between the cord and the ganglion, he succeeded in producing a degenerative process, not only peripherically, but in the cord also. This experiment, combined with what Ferrier's and Fritsch and Hitzig's experiments had taught us, would seem to explain the changes in the cord in paralytic insanity without supposing the cord primarily affected. At present we can not but admit the existence of motory centers in the gray matter of the brain. This being diseased, the motory centers of the cortical layers were not likely to be spared; and they being destroyed, the cord was likely to become degenerated, just as in Schiff's experiments, after section of the posterior roots between the cord and ganglion.

Dr. Epstein referred to two cases of progressive paralytic insanity seen by him, in which there was at times a great degree of heat. He accounted for this by the supposition that while there might be a degenerative process going on in one part of the brain there might be excessive action in another part. In senile atrophy

there may be heat, owing to the fact that a certain part of the brain may be excited to increased action.

Dr. Mackenzie presented several pathological specimens :

1. An exceedingly interesting specimen of abscess of the lung. This was removed from the body of a man who had died in the surgical ward of the Cincinnati Hospital. Patient came in to be treated for an ulcer on the leg ; was soon after taken with delirium tremens, and died in a few days. In one lung was found an abscess, surrounded by a firm membrane, and this by red hepatisation—the latter secondary. No emboli in any part of the body ; so this cavity could not have been of embolic origin.

2. Kidney from same person. The pelvis and calyces, at lower portion dilated to great extent. Absorption of tubular portion.

3. From a child which had a tumor projecting from near root of nose at birth. The tumor was at first translucent and somewhat tuberculated. It soon lost its translucency. On examination, it was found to be hernia cerebri. The child died when less than one month old.

4. Ossification of anterior portion of falx cerebri, with some perforations through osseous tissue.

Dr. Taylor said this form of ossification was the most frequent form of ossifications of the membranes of the brain. In these cases there are generally no mental symptoms.

Dr. Holdt had seen some cases of ossifications of the falx. There was no mental trouble. Isolated deposits in the soft membranes are connected with mental symptoms.

Dr. Mackenzie said there was no mental symptoms in this case, or in the case of the child above reported.

Society met March 16, 1875—president, *Dr. Kemper*, in the chair.

The following case was reported by *Dr. Culbertson*: He was called recently to see a lady, who, for three months, had suffered from a severe intermittent sciatic rheumatism. She had been under the care of a homeopathic physician, but had obtained no relief. The paroxysms occurred on alternate nights, showing that it was due to some malarious influence ; and were so severe that she had not slept during the nights of the paroxysms for two or three weeks. He gave her ten grains of quinine, morning and evening, and fifteen grains of iod. potass. and eight grains of bromide of potass. three times a day, which was followed by speedy recovery.

Dr. Murphy reported the following case: An elderly gentleman, of the legal profession, having been very busily engaged with an important case for ten days, returned to his home one Saturday night much exhausted. On Sunday he remained at home and partook of his usual meals. In the evening he had some difficulty in urinating. He had a severe pain at the end of the penis. On examining his urine he was surprised to see that he had passed some blood. Half an hour later he had another call, when he passed about half an ounce of blood. *Dr. Mackenzie* saw the patient soon after and administered an alkali. *Dr. Murphy* saw the case the same evening. Patient had passed blood seven times. With one of the discharges there was some urine. Patient had no pain nor tenderness over the bladder. Alkaline treatment continued. At 8 A. M. Monday, he saw the patient again. He had been up every half hour. After the last passage of blood he had discharged three or four ounces of urine of a smoky color. The trouble continued several days. He passed blood frequently during the day; less frequently during the night. The urine was examined twice, but no albumen was found. The quantity of urine was diminished, and had been for years. Quinine, mass hyd., and ext. colocy. were administered, with ultimate relief. Diuretics were given freely. *Dr. Murphy* had examined the prostate gland and found it to be enlarged. Temporary engorgement of this gland, the doctor thought, was the source of this hemorrhage. The patient was in a good state of preservation for a person seventy years of age. He had suffered during the two preceding autumns from severe attacks of pharyngitis, which he now had in a chronic form.

Dr. Carson asked whether the prostate had been examined while the hemorrhage was going on.

Dr. Murphy said it had been, and it had been found larger than when there was no hemorrhage. After the purgative, tannic acid had been given freely, but no good results had been observed.

Dr. Comegys said that pain at the end of the penis is a common symptom of disease of the prostate, which he thought was the source of the hemorrhage in this case. The age of *Dr. Murphy's* patient would indicate that a change was going on in the blood-vessels, which would predispose to hemorrhage from their rupture.

Dr. Murphy reported a case of petit mal, coming on in a man who, while in the army, had suffered from a compound comminuted

fracture of the humerus. Some loose fragments of bone were removed, and in ten weeks he returned to the field with a badly united bone. While in Louisville, when coming off the field from a review, his servant told him that he had had a singular spell. He served out his time in the army, and since that time he has been living in a western city, where he acted as agent for a manufacturing company. The epileptic seizures became more frequent, until he had one or two every day, rendering him unfit for the proper transaction of business. Dr. Murphy being consulted, advised him to discontinue all business. Bromides had already been administered, and were continued until they produced bromidism, when they were discontinued. No good effect had been observed from their administration. Fluid extract of ergot and belladonna were given in large doses. Under the effect of these remedies he remained for some time without an attack; but on the return of cold weather he had a recurrence of the attack. Believing that in the badly united fracture of the humerus there might be some source of irritation, Dr. Murphy had his patient examined by Dr. Mussey, but none could be found. He had had a chancre some years before, but there never had been any constitutional manifestation of syphilis. The patient had no paralysis, and no unusual sensations, but Dr. Murphy inclined to the opinion that his case was an unpromising one. He thought that in these cases of petit mal the bromides were not serviceable. Amputation of the injured arm might effect a cure, if there was any irritation arising from the injury. Ergot had stopped the headaches from which he had suffered.

Dr. Comegys thought this to be a case of epilepsy from irritation, which might be cured by exsection of the injured bone. He related a case of petit mal which came under his care. During the attacks the patient had an irresistible impulse to climb. The bromides had been used in this case without any benefit.

Dr. Clark reported a case of a young man who, at the age of thirteen, was attacked with epilepsy, which increased in frequency and severity until his mental powers began to fail. During one of his fits he fell backward into a kettle of boiling water which was over the fire, burning and scalding himself severely. The next day he had an epileptic seizure, but he has had none since, and is now a man of at least average mental capacity.

Dr. Carson said, that the fact that in the case reported by Dr. Murphy there had been no syphilitic manifestations, did not

show that his nervous system may not have been affected. In such a case he would try the effect of iodid. potass. He now had under his care a boy who had had five or six epileptic attacks daily. Bromide of potass., in thirty-grain doses, had reduced the number, and he was, at one time, without a paroxysm for three months, when he left the hospital. Recently he got worse, returned to the hospital, and now had several attacks daily. He had been helped some by the hypodermic use of morphia. He related the case of a woman who, at the climacteric period, became epileptic. She fell into the fire, and during the time of cicatrization she did not have an epileptic attack.

The society met in regular session March 23, 1875.

Dr. C. P. Judkins said he had recently read a paper before the society on the use of mercury in syphilis, in which he advocated the doctrine that the use of that remedy was unnecessary, if not harmful, in that disease. Since the reading of the paper he had treated a man for syphilitic iritis in two different attacks. In both attacks the disease was well marked, and there were unmistakable evidences of the specific infection. In the first attack he treated the case with mercury, and kept the pupil dilated with atropia. In the second attack, which occurred two months later, he used atropia, and gave tr. ferri mur. internally. Gave no mercury. The disease disappeared as speedily in the second attack as in the first.

Dr. Kearney said that while he did not wish to convey the impression that mercury was necessary in the treatment of all cases of syphilis, the weight of respectable authorities was in favor of its use.

Society met March 30, 1875—*Dr. Kemper* in the chair.

Dr. Taylor, referring to the subject of progressive paralysis, which had recently been before the society, said he had within the last few months a case which he thought might properly be classified under that head.

About five months ago, a woman, 53 years old, the mother of five children, consulted the doctor, complaining that she vomited daily for nine months. Owing to the irritability of the stomach, she could partake of but little food at a time. Patient was in good circumstances, presented the appearance of good health, was in full flesh, and had walked a distance of several squares to the doctor's

office. He suspected that the too free use of alcoholic stimulants may have been the cause of the trouble. The treatment was addressed to the stomach symptoms. A few weeks later, he was called to her house, and found her passing from the bowel a quantity of dark semi-fluid blood. The vomiting had continued, and she was still unable to take more than a small quantity of food at a time. Careful examination revealed no tumor, and only slight tenderness over the abdomen. After a few days' quiet, and the administration of acet. lead, opium, bismuth, etc., and the use of counter-irritants, the discharge had stopped and eventually the vomiting ceased, and she could take the ordinary amount of food without trouble. Two months ago, he was again consulted by the patient, who complained of difficulty in raising her arms and defective use of her hands, the paralysis more marked on the ulnar side than on the radial. The paralysis increased; soon the face was drawn to one side; the tongue, when protruded, was turned to one side, and there was loss of power in the legs. Simultaneously there was aphonia. She lost flesh and muscular power, but there was no atrophy, except from want of exercise; some tremulousness of limbs. There was some mental disturbance, as loss of memory and perversion of ideas. She had had no convulsions.

For one month past he can not observe that there has been any increase in her symptoms. Early in the case, there was headache and some sleeplessness, but lately she sleeps well. The treatment has been supporting—quinine and iron. Iodide of potass. was given with some benefit, the headache having subsided under its administration.

Dr. Carson said that age, sex, tremulousness, and the fact that the paralysis commenced at the upper part of the body, are against the supposition of progressive paralysis. He regarded it as more likely to be a case of cerebro-spinal sclerosis. The suspected cause—too free use of alcoholic stimulants—might be operative in either case.

The society met April 6, 1875, Dr. Kemper in the chair.

Dr. Dandridge presented a number of pathological specimens recently taken from a patient who had died in the Cincinnati Hospital, with the following report of autopsy:

On opening the abdominal cavity the bladder, ureters, and pelves of both kidneys were found greatly distended. Pressure on the bladder easily forced urine from the urethra. On removing the

organs, the urine in the bladder was found to be clear, straw-colored, and not at all decomposed. The walls of the bladder were somewhat thickened, but the mucous membrane was perfectly normal. The middle lobe of the prostate was somewhat enlarged. A probe could readily be passed through the opening of the ureters. The ureters were several times larger than normal, and the pelves were so distended that the kidney appeared like sacs, surrounded by renal substance which was not more than a quarter of an inch thick at places. The cavity of the pericardium contained seventeen ounces of bloody fluid, and the membrane was everywhere covered with partly organized lymph. There was enlargement of the salivary glands, and œdematous swelling of the integuments, the neck, and upper part of the chest. The ary-epiglottidean folds were very œdematous. There was also a very slight constriction of the rectum, with some thickening of its walls, six to eight inches from the anus.

The history briefly is (November 10): Man aged 35; has had primary sore, and been a drinker; family history negative. For months has complained of not being able to retain urine; it escapes from him both sleeping and waking; urine acid, specific gravity 1,010; no albumen present. He continued to pass from seventy-five to one hundred ounces of urine, specific gravity 1,010 to 1,012. Once it was found slightly albuminous, but only once.

March 17. Developed symptoms of pericarditis.

April 1. There developed swelling of the salivary glands, and œdema of the integuments of neck and upper and anterior part of chest. He died with symptoms of œdema of glottis.

The case is of interest from the difficulty in discovering the cause of the obstruction to the outflow of urine. The enlargement of the prostate could not account for it, as slight pressure on the bladder forced urine through the urethra. It seems probable that at some previous time there had been paralysis of the bladder, which, for this reason, had allowed a constant overdistention with urine, and thus obstructing the flow from the ureters, has finally produced distention of the pelves and atrophy of the kidney substance. The pericarditis was probably an intercurrent affection, depending upon the only partial elimination of the renal salts. A like explanation is also sufficient to account for the œdema of the glottis. The dribbling of urine spoken of in the history seems to render this view reasonable.

Dr. Mackenzie said the patient whose history had been given by

Dr. Dandridge had been in the hospital for some time, and for six weeks had been under his care. He was at that time passing a large quantity of urine daily. He seemed to be unable to retain it. His disease had been diagnosed diabetes insipidus. He had tested the urine for albumen, but had detected none until a short time before the supervention of the pericarditis, and then it was found only in small quantity.

A marked peculiarity in this case was the length of time the "to and fro" sound could be heard when the pericardium was so much distended. This sound could not be heard at all times. If patient took a full breath, it could not be heard, but if he took a moderate breath and retained it, the sound could be distinctly heard.

The occurrence of the glandular swelling had been very sudden. He had never seen the sublingual and submaxillary glands so swollen. There was a very copious flow of saliva of a very offensive odor. He regarded the œdema of the glottis as the result of the inflammation arising in the glands, and not the sequel of the renal disease. As to the dilatation of the ureters and pelves of the kidneys, he did not think the theory that it was due to paralysis of the bladder tenable. In this case there was decided muscular hypertrophy; whereas, if paralysis had existed, there would have been atrophy. The mucous membrane was normal in appearance, when, if there had been paralysis, it would have been ulcerated. It has been stated that the urine was alkaline. It is true the specimen examined was found to be so, but it had been taken from a urinal in which the urine had stood for some time. When first passed it was always acid, but soon became alkaline from decomposition. At no time were casts found in the urine. This fact would have excluded the supposition that this was a case of Bright's disease.

Dr. Dandridge thought the explanation given of the dilatation of the pelves and ureters not altogether satisfactory, but he regarded it as more satisfactory than any that had been given. He thought, from the condition presented by the kidney, that the obstruction must have been of long standing. There was no organic stricture.

Dr. Carson thought the explanation offered did not meet all the requirements of the case. He said that in Bright's disease there was sometimes so copious a flow of urine that mistakes in diagnosis had occurred—the disease being mistaken for diabetes insipidus. He detailed a case of this kind.

Dr. Taylor said the case presented many points of interest. The explanation of the morbid condition was not satisfactory. The muscular and mucous coats were not in the condition in which they would have been found if paralysis had existed. Even if paralysis had existed, how account for the great increase in the secretion of urine.

He was unable to give an explanation, but thought the disease primarily in the kidneys. He does not consider it a case of Bright's disease. In regard to the suffocation, he raised the question as to the propriety of the operation of tracheotomy in a case of this kind—the œdema being supraglottic.

Dr. Dandridge thought the great amount of swelling about the neck would have prevented tracheotomy.

Dr. Mackenzie said that at the time he saw the patient there was not sufficient cyanosis to have justified tracheotomy. He did not think it would have been justifiable at any time in the course of the disease.

Dr. Taylor said that twelve days ago he was called to the country to assist in an obstetrical case. He found a woman 35 years of age, who had been in labor with her first child for three days. The membranes had ruptured the first day, and labor had progressed slowly for twenty-four hours, when she began to complain of an inability to urinate, but constant desire to do so. The physician in attendance had tried to introduce a metallic catheter on the second day, but without success. When *Dr. Taylor* saw her she had not passed any urine for forty hours. She had a pulse of 150; was delirious; had had no uterine contractions for twelve hours. Her abdomen was distended; the upper part tympanitic, the lower part dull on percussion. There was a very offensive discharge from the vagina. He introduced a flexible catheter and drew off half a gallon of urine. Immediately the distention disappeared. The patient being much prostrated, stimulants were given, and by forceps a delivery was effected.

Dr. Taylor reported this case to make some comments on the alleged dangers of retention of urine. One of the dangers, we are told, is rupture of the bladder. In this case there was a favorable opportunity, but such accident had not occurred. Again, peritonitis is said to be one of the dangers. He had never seen it occur. There was no evidence of it in this case. There was not the tenderness there would have been if it had been present. He thought these accidents not so likely to occur as we are taught.

Dr. Kearney said, with reference to rupture of the bladder, that such an occurrence was very exceptional. An overdistended bladder may be ruptured by a blow or by pressure, but a rupture from the mere accumulation of urine is a very uncommon event.

Selections.

“Extraordinary Longevity.—The Philadelphia *Evening Bulletin*, of October 1, 1874, contains an obituary notice of George Labar, who died in September, in Monroe county, Pennsylvania. According to the *Bulletin*, he was born in the autumn of 1763, in Mount Bethel, now Portland, Northumberland county, Pennsylvania, where his baptismal register is still preserved. He was of French descent, his grandfather having been a fugitive from religious persecution. His father lived to the age of one hundred and five years. In 1870 he had a brother living who was ninety-eight years of age, one sister aged eighty-six, and another aged ninety-two years. He had lived an active out-door life, and had known very little sickness. He used tobacco very freely all his life, both smoking and chewing, but was very moderate in the use of alcoholic liquors. As there seems no reason to doubt the accuracy of the statements given, this is one of the most extraordinary cases of longevity on record.”—*New York Medical Journal*.

Young and middle-aged men should take warning from the above sad occurrence, as there is but little doubt that Mr. Labar cut short his earthly career by the intemperate use of tobacco, accompanied by a moderate use of alcoholic stimulants. If you have any desire or expectation of living to the age of two centuries, or even one and a-half centuries, reform, produce a compound comminuted fracture of your pipe, abjure the fragrant Connecticut seed-leaf or Havana, and consign your fine-cut to the goats, as they are known to grow fat on the succulent juice. As to the fluid that makes the heart glad, remember it has a reflex action, and don't any more. When tempted to indulge, let the image of George Labar present itself to your mind's eye, and consider the shortening of his days by not having closely obeyed the precept of “Touch not, taste not, handle not the unclean thing.”

Comedones.—These disfiguring, black-headed glandular enlargements, often seen on the faces of the young, can be readily dispersed, says Dr. Gutceit, by bathing them night and morning with a dilute solution of aqua ammoniæ (a teaspoonful of the liq. ammon. caust., Ger. pharm., to the wineglassful of water).

A Bad Habit.—It is my wish, in a brief article, to call attention to a habit which is very prevalent, and about which much might be said. The habit to which I refer is that of sitting with the feet elevated. I am not aware that any medical writer has ever touched upon this subject and the symptoms produced by it. Any one who will take the trouble to observe and examine for themselves, will be convinced that it is very common, more especially among business men, students, and those who lead an inactive life. Nature never intended for us to keep our feet above our heads, or she would have put them there. The first thought may be that "there is nothing in it," but if one will practice it with a view of finding out the truth for themselves, they will be convinced that it ought to be called a bad habit. Should you call upon a business man at his office and engage him in conversation, the chances are that he will have his feet upon the desk. The same thing happens while he is reading his morning paper, or doing anything else that does not require his feet to be on the floor. The habit becomes so fixed that whenever he sits down he is uneasy until he is in position. No matter where he is, the disposition to get the heels higher than the head manifests itself.

My attention was called to the habit for the first time when a student, while boring my way into the mysteries of physic. My favorite position was to sit with my feet upon the top of a desk, or a chair, which brought them upon a level with my head. After pursuing this course for about three months, I began to be troubled with headache, a feeling of lassitude, and a sense of oppression in the cardiac region, with palpitation of the heart now and then. The cardiac region seemed very sensitive, and every beat of the heart could be felt. Occasionally it would cease, and then it start up with one great thump, as it does when one receives a sudden fright. Not knowing the cause of these symptoms, I began to labor under the impression that I was developing some serious disease. Being new in the study of disease, my reading on that subject did not tend to diminish that idea. Soon I was obliged to throw down my books and take to outdoor exercise. For a week I pursued this course, and to my surprise the symptoms had nearly vanished. Shortly after this I went to lectures. Here the old position was resumed, the seats being admirably arranged for that purpose. In a month the trouble returned worse than before, and I was obliged to take to my bed for a couple of days. Still believing that a serious disease of the heart was rapidly

developing itself, I had one of the professors of the college call, and after making an examination, he said, much to my relief, that I was "all right." Determined to find the cause of the trouble, I began to search around for it. One day the idea occurred to me that sitting with the feet up might be the cause. To prove this I tried it for a week, when the same symptoms began to appear again. After this I kept my feet on the floor, where they belonged, for a couple of weeks. Gradually the symptoms ceased, not to return again, for I have tried to keep in "position" since.

The question may be asked, "How does this position cause these symptoms?"

It will be seen that if the lower extremities are flexed upon the abdomen, the femoral artery which supplies them, and which escapes under Poupart's ligament, will be compressed, and the large amount of blood which should go to these parts is prevented from doing so. Having no other outlet here, it must be thrown into the other organs of the body, viz., the liver, spleen, kidneys, lungs, and brain. The vessels become distended, and the damming up of the blood causes the heart to act with more force. The contents of the abdomen are forced upward also, encroaching upon the space occupied by the lungs and heart. The heart is forced out of its natural position, the apex being raised and carried to the left. The pulse in the wrist becomes stronger and quicker.

I have often questioned persons whom I have found in this position, and have met with but few cases where these symptoms were not found. That this habit has a bad effect upon those who have any organic disease of the heart I have no doubt, as I have found it to be true in a number of cases. Corpulent persons are more affected by this habit than lean ones, but in all it is a habit to be avoided.—CHARLES HERVEY HUNT, M.D., *Stanwood, Iowa, in Medical Examiner.*

The Wet Sheet in Scarlatina.—As the present high rate of mortality from epidemic scarlatina may justify practical suggestions prompted by experience, I feel it my duty to endeavor to excite the profession to a reconsideration of the remedial powers of the wet sheet as an auxiliary in promoting cutaneous elimination.

Though all agree as to the importance of promoting and sustaining cutaneous elimination in the prevention of cerebral, spinal, and other congestions, and, at a later stage, the disintegration of mucous membranes, dropsy, and glandular enlargements, yet this

simple, powerful, and ready-at-hand auxiliary is unappreciated. Forty years' experience has assured me that this plain or medicated vapor-giving envelope affords the best *external* means for eliminating scarlatinal poison and preventing destructive sequelæ. It promptly suppresses pyrexial heat and itching; produces sleep, with a soft secretive skin, more or less continuously; and enables the digestive organs to accomplish that great desideratum in the treatment of scarlatina—viz., absorption of highly nutritious food. It may be repeated on the recurrence of the febrile paroxysm, two, three, or four times in twenty-four hours, the patient remaining enveloped from half an hour to an hour. Mothers and nurses who have witnessed its efficacy are most earnest in its repetition. My plan of procedure is to immerse a night-gown, slit up at the front, in hot water (half a pint to a pint), pure, or medicated with a drachm or two drachms of tincture of capsicum, or in the infusion of three or four pods; or in mustard-water, the clear supernatant fluid from a tablespoonful of mustard to a pint of water; extending the gown over the feet by means of a towel immersed in the same fluid, both to be well rung out and suddenly applied, and the patient quickly packed in two blankets previously placed on the adjoining sofa or bed; another blanket, or two pillows, or an eider-down quilt covering all.

The medicated packing is preferable in the incipency, and at any other time to evoke the rash, and in cases of cerebral oppression, with pale skin, low pulse, and delirium. Last month I had a case of this type, in which the mustard packing was applied. It did not elicit the rash, but it cured the delirium, raised an alarmingly depressed pulse, and restored the excretions. This effect was solely dependent on the medicated packing, and the patient, a girl of thirteen, could not swallow medicine or food, and enemata had not then been administered. With the aid of a tonic she made the best recovery of three in the same family, and had no sequelæ.

The auxiliary mode of treatment here defined is by no means intended to exclude the ordinary plan which every practitioner's experience has led him to select and rely upon; but I am of opinion that if packing is judiciously incorporated with such reliable treatment, it will be the means of saving many lives that would otherwise be lost, and of diminishing the severity and duration of the sequelæ.

I further believe that in other cases of blood-poisoning, the exhibition of medicaments cutaneously by vapor would in some de-

gree neutralize the poison, aid its elimination, and, as in packing, soothe the whole nervous system. During a cholera epidemic in Liverpool, I had part charge of a district where nearly all who first went into the hospital died. One woman, with cholera in the malignant form, was packed in a wet sheet with half a pound of mustard, and remained inclosed six hours, notwithstanding her imploring entreaties to be released. She drank copiously of iced water. The vomiting, purging, and cramps began to abate in two hours, and had ceased when she was unwrapped, presenting the ordinary lobster change from blue to red. Gastric fever, with great thirst, ensued for several days, when she recovered as a brand plucked from the burning.

Modern parliamentary mustard, deprived of capsicum and other adjuvantia which made it formerly a condiment so famous, would not have answered the purpose. Doubtless, *persevering cutaneous elimination* is a great medical power.

Not only as an eliminator may the wet medicated envelope be used, but as an antispasmodic in the relief of pain and irritation in any of the membranes, mucous, submucous, or serous; with the aid of chloral, morphia, conium, belladonna, nux vomica, etc., dissolved in the water, or sprinkled on any particular part of the wet sheet. It has the merit of antiquity from the ancient Romans, and among the farmers of Great Britain for the relief of colic and the inflammatory diseases of cattle. A sheet wet with some herb decoction, or water sprinkled with turpentine, was thrown over the suffering animal, and enveloped by blankets, quilts, and overcoats, snatched from the beds on which "the rude forefathers of the hamlet slept." And doubtless, many a pang was thus allayed and many a life preserved. Modern experience has witnessed the amazing relief procurable from the wet sheet, in its simple form, in pyrexial and glandular disorders, and from the medicated form in the zymotic and spasmodic affections. In stridulous croup, for instance, I have seen the mustard sheet act magically after other means more orthodox had failed. Its power is also potential in diphtheria simulating croup, and in strong doses, in inflammatory croup, sometimes averting the impending tracheotomy knife.

The suggestion to use this auxiliary plan of treatment should not be slighted because of its antiquity, or of its having been used empirically. Many blessings, moral and physical, have fallen into desuetude, and require revivals to awaken a consciousness of their existence and utility; and this is one of them, lying neglected within

our reach. Objection would be rational if the more primitive plan of enveloping the suffering man or beast within the skin of a newly killed animal were recommended; but when one so simple and close at hand, so easily adapted, so soothing, and so powerful as an auxiliary in the routine of medical treatment is recommended, suffering humanity should have the benefit of it, especially where no self-interest prompts the recommendation—except the satisfaction of doing good by presenting the cup of cold water so typical of charity.—JOHN TAYLOR, M.R.C.S., L.S.A., in *London Lancet*.

The Localization of the Functions of the Brain.—Since the publication of Ferrier's researches on the existence of centers for voluntary movements in the cortical gray matter of the brain, and his repetition and extension of Fritsch and Hitzig's experiments, numerous observers have undertaken fresh experiments, with the view of correcting or extending the conclusions at which he arrived, and of criticizing his method of observation. So far as the main outlines of their results are concerned, if we except minor points of difference between Hitzig and Ferrier, as to the exact localization of certain centers, the majority of observers are agreed that the application of electrodes over certain well-defined and limited portions of the convolutions gives rise to certain definite movements of the limbs or face, which are usually of a combined nature; and that there are homologous centers in similar portions of the brain of different animals. But with regard to the interpretation of these results there is still much diversity of opinion; some observers agreeing with Ferrier that the movements are produced by excitation of the gray matter itself; whilst others, as Dupuy, Schiff, Brown-Séquard, and Burdon-Sanderson, consider that they are due to conduction of the galvanic current to the ganglia of the base of the brain, or to the pons and medulla. But it is due to Ferrier to remark that he does not deny that the current may be substituted for the normal nervous discharge of the convolutional gray matter, and conducted by the same white fasciculi to the basal ganglia; nor does it at all disprove the existence of such higher centers for the origination of movements through the influence of the will, that after removal of the cortical gray matter, as in Sanderson's experiments, the same movements result on electric stimulation.

Of the more recent observers on the subject, there are none whose experiments have a greater value than those of MM. CAR-

VILLE and DURET, both on account of their well-known ability and the amount of attention they have devoted to the subject. In two former communications to the Société de Biologie they criticized in detail the possible errors arising from diffusion of the currents employed; and in a more recent note, presented on October 10th, after answering certain objections to their former conclusions, they give the results of a fresh series of experiments, undertaken with the view of deciding whether centers for voluntary movements really exist in the gray matter of the convolutions, and also of determining more precisely the relation of the latter with the ganglia of the base of the brains.

With regard to the diffusion of currents, they have found that whilst there is superficial diffusion, as shown by Dupuy, and more recently by Gudden, there occurs also diffusion in the deeper parts, but that the currents seem to follow especially certain fasciculi of the corona radiata. Moreover, the careful removal of the cortical gray matter of one of Ferrier's centers, which Burdon-Sanderson has designated "active spots," or the section of the connecting fibers at various distances from the surface, did not prevent the occurrence of equally strong and localized movements on electrical excitation. It was necessary, however, to increase slightly the strength of the current employed; and the increase required was greater the deeper the section from the surface. They account for this necessity by the increased diffusion due to the exudation of blood on the cut surface; and to prove that this was the cause, they cauterized the surface of the wound made by removal of part of the convolutions, and found that no increase in the strength of the current was then needed.

These facts, however, whilst showing that the excitation of the cortical gray matter is not necessary for the production of localized movements, leave untouched the question as to whether the centers for voluntary movements really exist. That certain bundles of white fibers pass to particular points of the surface of the convolutions, and are there in organic connection with certain groups of nerve-cells, seems to be placed beyond doubt by Ferrier's experiments; and the fact is acknowledged by MM. Carville and Duret. In order to elucidate the question, these observers refer to the occurrence of movements in the opposite limb when the central end of the cut sciatic nerve is stimulated by electricity. Here, they say, the electric stimulus no doubt acts through the medium of the gray centers in the spinal cord, substituting itself for the normal

nervous stimulus; yet experiment seems to show that the gray matter of the cord is not *directly* excitable by electricity. Hence they argue that the nerve cell does not react except when excited through its corresponding nerve-tubule. So that the cells of the cortical gray matter may form only reflex or perceptive centers. In order to determine this question, they resorted to the old method of removing the portions of gray matter considered to be centers, and allowing the animals to live. In one of these experiments they carefully removed the center for the extension of the fore and hind paws of a cat; and on electrization they obtained a repetition of the same movements as before. On the evening of the same day the animal had some difficulty in standing, and rested on the dorsum of the left forepaw and on the back of the claws of the hindpaw. In walking, the fore limb was thrown forward and allowed to fall in such a manner, as partly to counteract the loss of power of the extensors, whilst the hind limb was dragged on the ground in a slightly flexed position. The animal often fell on to the left side. On the second day after the operation, the loss of power of the extensors was much less marked; and by the fifth day they appeared to have recovered completely. A similar experiment on a dog led to a like result. Hence the authors conclude that the paralysis induced by removal of the so-called centers is only transitory. But, as Ferrier has shown, the paralysis differs in degree according as the movements are independent or associated with those of the opposite side; and he has observed that a mere degree of weakness may be produced by destruction of the centers for movements of the paw in dogs.

MM. Carville and Duret then examined, by means of sections made at various points, the course by which the impressions are conveyed to the deeper ganglia. They found that whilst section of the expansion of one cerebral peduncle at the level of or below the corpus striatum produced complete and permanent motor paralysis of the opposite limbs, and entirely prevented the occurrence of movements of the paws on excitation of the cortical centers, the almost complete removal of the intra-ventricular nucleus of the corpus striatum produced no effect on the excitability or the motor power. Hence they conclude that the currents pass downward in the expansion of the peduncle, and act on the nuclei of the pons and medulla.

Lastly, they inquire what is the explanation of the speedy cure when only the cortical gray center is removed. Referring to the

theory of Brown-Séquard, which has been adopted by Ferrier, that the brain is a double organ, and that the uninjured hemisphere takes on the functions of the injured, they inquired by what system of fibers the supplementary action is effected. Three hypotheses present themselves; firstly, that fibers from the left hemisphere (if we suppose the right injured), pass across in the corpus callosum, and are either connected with the corpus striatum, or pass downward in the right cerebral peduncle; or, secondly, that the fibers from the left hemisphere descend in the peduncle of the same side, and after their decussation act upon the nuclei in the right half of the medulla oblongata, and set up a corresponding action by lateral excitation in the nuclei in the left half; or, lastly, that the intra-ventricular nucleus of the injured side may act as a supplementary center. The first hypothesis was negatived by the fact that complete section of the corpus callosum in a dog, from which a cortical center had been removed, did not reproduce the paralysis after its cure, nor occasion any difficulty in walking. The second hypothesis seems improbable, from the fact that in cases of disease of the peduncular expansion in the corpus striatum the paralysis is permanent, and no supplementary action occurs. Hence they conclude that no such supplementary action of the sound hemisphere exists. The third hypothesis—namely, that the nucleus candatus acts as a second center for voluntary movements—seems to them to agree with the results of experience and of clinical observation; but, as they promise to communicate the results of further experiments on this point, it is unnecessary to enter upon it here. It is to be regretted that they should have limited their experiments to dogs and cats, but it is at the same time satisfactory to find that their main results confirm so strikingly those previously arrived at by Hitzig and Ferrier.—*Lancet*, Jan. 16, 1875.

Increase in the Duration of Life.—In ancient Rome, during the period between the years 200 and 300 A. D., the average duration of life among the upper classes was thirty years. In the present century, among the same classes of people, it amounts to fifty years. In the sixteenth century the mean duration of life in Geneva was 21.21 years, between 1814 and 1833 it was 40.68 years, and at the present time as many people live to seventy years of age as three hundred years ago lived to the age of forty-three. In the year 1693 the British government borrowed money, the amounts borrowed to be paid in annuities, on the basis of the mean

duration of life at that time. The state treasury made thereby a good bargain, and all parties to the transaction were satisfied. Ninety-seven years later, Pitt established another tontine or annuity company, based on the presumption that the mortality would remain the same as 100 years before. But in this instance it transpired that the government had made a bad bargain, since while in the first tontine 10,000 persons of either sex died under the age of twenty-eight, one hundred years later only 5,772 males and 6,416 females died under this age. From these facts it appears that life, under certain favorable influences, has gained in many, and probably in all its forms and manifestations, both in vigor and duration. To still further promote this tendency, it is only necessary that these conditions under which the attainment of the desired end is possible, be made to accord with the fundamental natural laws.—*Deutsche Versicherungs-Zeitung*.

Fissures in Ano treated with Iodoform.—Dr. Francesco Parona (*Giornale Italiano delle Mal. Ven. e della Pelle*, October) gives his experience of iodoform in fissures of the anus, and strongly recommends it. He believes it acts in a great measure as a local anæsthetic, "which allays the spasm of the sphincter during defecation, while it favors cicatrization by neutralizing the irritating effects of fecal matters which may remain on the ulcerated surface." It has also a direct healing action. Dr. Parona uses the iodoform as an ointment (one part to three of lard), and applies it on a small cylinder of charpie, of a size requiring but little force for its introduction. The charpie has the advantage that its filaments adapt themselves readily to the slight irregularities of the anal mucous membrane. The dressing is changed twice a day, and replaced after each motion, and in the majority of cases the pain and spasm caused by the fissure cease in a few days, and the patient is well in a relatively short time. Of four cases, of which details are given, the longest time was twenty days, while one of the patients had been ill four months previous to the treatment.—*Medical Times and Gazette*.

Warts.—Dr. Guttceit recommends rubbing warts, night and morning, with a moistened piece of muriate of ammonia. They soften and dwindle away, leaving no such white mark as follows their dispersion with lunar caustic.

Editorial.

The subject of a broader and more thorough medical education for the coming medical man is ever and anon agitated by college faculties, medical societies, and the medical press. We believe in that agitation. It has done good, is doing good now, and will accomplish yet more in the future. There are croakers in the medical profession as in every other calling or pursuit, who see only good in the past, every thing out of gear in the present, and always ready to predict evil for the future. Such men generally mean well, but they are mental dyspeptics, and unconscious of the fact that they are themselves, nine times out of ten, dead weights; that the men of progress are actually carrying. We make this statement in view of the fact that the science of medicine has been and is making continuous advances in every department; and correspondingly, do we find medical education and educators stepping to the front. Observe the requirements for graduation in any of our medical colleges at each decade during the past half century, and the progress in the right direction will at once be manifest, and the advance so great that who will dare predict the future. The time is within the memory of many, when the transition of a professor from one chair to another was no infrequent occurrence, and almost any member of the faculty could acceptably fill any of the then designated chairs. Compare that state of affairs with the present and mark the change. In the most prominent colleges in the large cities nearly every chair is filled by a man who has made a specialty of his department, and to a great extent, ignores study in other directions. Particularly is this the case in regard to what are known as the practical chairs. Again we find, in the advanced schools, these chairs divided and subdivided, and men correspondingly filling them who have devoted their whole attention to branches of a department in medicine. And, by the way, these are the men who are daily making discoveries and doing original work for the advancement of science and their profession.

Such being the case, let us consider the requirements of the medical student of to-day. At his examination for his degree, he

is required to pass a satisfactory examination before some eight or ten specialists in their own departments. Now, we think it extremely doubtful whether one-half of the professors in some of our colleges at this time could pass a very satisfactory examination before the other half; and yet they are acknowledged to be skillful teachers. A natural result of the teaching done by specialists is that every succeeding year sees a class of men sent forth to practice medicine, better trained and prepared than their predecessors.

What of the future? Well, the car of progress will move on. A very high standard has been set by a few of the colleges; others will soon fall into the line, and we predict that the time is not far distant when all respectable medical colleges will demand of the student that matriculates a thorough preliminary education; the term of instruction will be lengthened, the seven, eight, or nine hours of intellectual cramming will be reduced to four, five, or six hours, and the mind will not be fed at the expense of the body. There will be an actual requirement of three or four years of systematic study.

The idea that a student is fitted for a degree and to practice the healing art, because he can pass a satisfactory examination before a lenient college faculty, is all bosh. Medicine is an intricate science; and, as we have indicated, the men who are advancing the science to-day are making a study of a special department of that science, and are not endeavoring to comprehend the whole domain. We know men of studious habits and retentive memories, who could take two or three text books, a conspectus, and compendium, and in three months pass a satisfactory examination before some college faculties. Will any man who knows aught of his profession pretend to say that these men would, after their examination, be prepared to practice medicine? We think not. On the contrary, we know that within that time they could have learned nothing of practical chemistry; their anatomical knowledge would be obtained from pictures, and so of their physiological observations; and as to clinical knowledge, that whole superstructure of medical science could not have received a single practical consideration.

Another tendency of the times, that is particularly observable in medical teaching, is its practical character. As well might bricks be made without straw as physicians or surgeons without clinical instruction. One of the prime factors of success to a

medical college is the ability of its faculty to furnish abundant clinical advantages, with plenty of material for dissections and practical demonstrations. Something more than charts and books are demanded.

Why are the services of the old practitioner so often demanded, while the young physician daily adds gloss to the seat of his trowsers while his visiting list remains blank? The people know that he of the gray locks has had long experience in watching the course of disease at the bedside. In that experience consisted his superior education, consequently his patrons knew his superior ability. That is why clinical or bedside instruction is in demand to-day. The student wants and will have practical instruction, with the patient before his eyes, and practical lessons in the laboratory, where he can handle the materials and make his own demonstrations and experiments.

In this way, and this way, only he knows he can truthfully go before the people and say, "I not only have my degree as a doctor of medicine, but have received practical bedside instruction, have witnessed the courses of diseases, and know how to combat symptoms that may arise from time to time, and have assisted in numerous surgical operations." It is amazing how quickly a neighborhood will find out how and where a young physician obtained his education, and whether it embraced a course in the hospital or not. Further, all other things being equal, who are the men called in by other members of the profession for consultation. Invariably the man who has had special advantages in clinical observation. We believe this to be one of the principal reasons many country practitioners have for resorting to the cities for private courses of instruction in the hospitals. They are ambitious to be in the front ranks of their profession, and know that not only will they be more appreciated by their fellows for their attainments, but their clientele will be enlarged. All honor to such men, for they are the men who reflect honor upon the profession they adorn.

Within the past few months a number of medical journals have called attention to the unethical conduct of those members of the medical profession, who take occasion to air their special skill and ability through the medium of the secular press.

Recently, while reading a morning paper, we came across the following communication in one of our daily papers, which, after reading, we could but exclaim, "Oh! fie, for shame!"

"PATTERSON, HARDIN Co., O., April 12.

"On Tuesday last we were called to assist Dr. A. Dunlap, of Springfield, O., in removing an ovarian tumor from one Mrs. H., of Fremont, Clark County, O. Doctors present from Springfield: Prof. A. Dunlap, C. Dunlap, and Totten; Ada, O., Dr. J. W. Morris; Fremont, Drs. Gard, Senseman, and McLaughlin; Patterson, Dr. W. H. Morris; Urbana, Drs. Mosgroves. There was great skill shown in the operation. The tumor was removed in a few minutes with the use of anæsthetics, without the least mote of any difficulty. Patient was left resting easy at 2 P. M. next morning.

"DR. W. H. MORRIS."

Now, we can not but think that Dr. Dunlap would have put a quietus on Dr. W. H. Morris, had he received any intimation that he was to be advertised in this special manner. Further, Dr. Dunlap's skill and success as a surgeon is well known both in the profession and among the laity, and he needs not to have his name heralded in a manner that is obnoxious to the body of the medical profession. And if, as stated by Dr. Morris, "the tumor (ovarian) was removed in a few minutes with the use of anæsthetics, without the least mote of any difficulty," we should like to see the case scientifically reported in one of our Cincinnati medical journals, for the immediate benefit of some of our home talent, as it is well known that the operation for the removal of ovarian tumors, in this vicinity, has not been accomplished without the least mote of any difficulty, but, on the other hand, difficulties of the gravest character have been encountered, and the rate of mortality after the operation very great.

We are under special obligations to Dr. B. Stanton, Secretary of the Cincinnati Medical Society, for the very full reports of society proceedings, furnished our readers each month.

Cure for Warts.—Lisfranc immerses the parts on which the warts are developed in a strong solution of black soap. This causes a slight cauterization of the surface of the wart. The loosened tissue is to be removed and the application repeated every day till cure is complete. Oil of vitriol should never be used for this purpose; it is very irritating, and inflames the warts instead of curing them. —*Trib. Med.*, 316, 1874.—*N. Y. Medical Journal*. G. R. C.

Reviews and Notices.

The Histology and Histo-chemistry of Man. A Treatise on the Elements of Composition and Structure of the Human Body. By HEINRICH FREY, Professor of Medicine at Zurich. Translated from the fourth German edition, by ARTHUR E. J. BARKER, Surgeon to the City of Dublin Hospital, etc., and revised by the author. With six hundred and eight engravings. New York: D, Appleton & Co.

The first part of this work is devoted to a study of the elements of composition—namely, those entering into the formation of the tissues, which, continuing in their original condition but a short time, undergo decay and metamorphosis; in consequence they are changed, resulting in an extensive series of chemical mutations, bound up with the exitus of matter. The introduction of new material to take the place of the waste also causes many chemical changes. All the various elements entering into these changes and resulting therefrom, are admirably demonstrated by the author, and illustrated wherever it is practicable by wood-cuts.

The absolute proof and illustration of the fact that “the cell” is *the starting point*, in the broadest meaning of the term, of the animal body, our author regards as “the greatest discovery ever made by the aid of the microscope.” He says: “The cell alone, and by itself, must be regarded as the primordial structural element of our frame, and that all the various other elementary parts to be found in the mature body are originally derived from the cell.” The characteristic features of the cells found in the various tissues of the body are described with care and great minuteness.

In part second the structure and composition of the tissues of the body are given with the characteristic minuteness and care of a thorough German student.

Part third is devoted to a study of the organs of the body, giving their minute anatomy and histological structure.

This work of Professor Frey is one of which the medical profession may well be proud. It practically illustrates the advances made in scientific investigation, and may justly be shown as one of the triumphs of modern medicine. It will at once command a place as a standard text-book; and not only should it have a place

in every medical library, but it should be thoroughly studied by every man who wishes to be regarded as a scientific physician.

For sale by Robert Clarke & Co.

Physicians' Case-Record and Prescription Blank Book. Cincinnati Case-Record Company. For sale by Robert Clarke & Co.

Any means that will in any degree stimulates physicians to keep a record of their cases, and enable them to accomplish that object with the least possible amount of labor and time, is, putting it very mildly, a good thing. This book answers the purpose for which it is designed very well. It occupies a small space, and yet contains all that is necessary for the jotting down of the points in a case. Two editions have been published—a small one, for carrying in the pocket, and one larger, for the office table.

A Course of Lectures on Physiology. Delivered by Professor Kuss, at the Medical School of the University of Strasburg. Edited by Matthias Duval, M.D. Translated from the second and revised edition, by ROBERT AMORY, M.D.

This work is especially designed to show the relations of physiology to histology, giving a very complete description of the microscopical appearance of the various organs of the human body. The author exhibits a thorough familiarity with the late advances made in physiological science, and although we have a number of acceptable works on this subject, we welcome this as one particularly well adapted to advanced students. Its terseness gives the reader and student an impression that it is really a great and large work, boiled down to the dimensions of a hand-book.

For sale by Robert Clarke & Co.

The Treatment of Nervous Diseases by Electricity. A review of the present extent of electrical treatment, with indications for its employment. By Dr. FRIEDRICH FIEBER, Vienna. Translated from the German by GEORGE M. SCHWEIG, M.D. New York: G. P. Putnam's Sons.

This is a very clever little monograph on the application of electricity, in nervous diseases, but we fail to find in it anything new, or that has not been made known to the profession through the medical press, and some half-dozen larger works that have been published on the same subject within the past year.

The author is an enthusiast on the subject, and reports some mar-

velous results from the use of electricity. As a therapeutic agent electricity holds no mean position, and we do not underrate the labors of those who are devoting special attention to its advancement as a department of science, but that they should make it a nostrum for the cure of all manner of diseases, has the effect of bringing its use into discredit.

For sale by George E. Stevens & Co.

Robertson's Charles the Fifth. By WILLIAM ROBERTSON. With an Account of the Emperor's Life after his Abdication, by WILLIAM H. PRESCOTT. New edition. In three volumes. J. B. Lippincott & Co., Publishers, Philadelphia. Vols. 2 and 3.

These volumes of Prescott's histories fully realize the expectations of the reader, in giving a most interesting account of the people, their rulers, and prominent personages during the eventful period in which Charles the Fifth was a reigning monarch. The ambitious schemes of Cardinal Wolsey; the marvelous history of Luther, and the reformation with which he was connected; the manner in which it affected the political fortunes of nations and prominent men; the wars waged against the pope, resulting in the capture and imprisonment of Pope Clement, and election of Pope Julius III.; the famous Council of Trent, and the death of Luther, are events that form epochs in the world's history. Recorded by Prescott in his inimitable style, and published by J. B. Lippincott & Co. in volumes of convenient size, they should, by reason of their actual merit, find a place in every library of any pretensions whatever.

For sale by Robert Clarke & Co. Price \$2.25 per volume.

The History of the Philadelphia School of Anatomy, and its Relations to Medical Teaching. A lecture delivered March 1, 1875, at its dissolution. By WILLIAM B. KEEN, M.D., Lecturer on Anatomy and Operative Surgery in the Philadelphia School of Anatomy.

The lecturer not only traces the relation that existed between this school and the regular colleges, but does it in a way that is highly entertaining, relating incidents that must have even sent the waistcoat buttons of the soberest Quaker racing after each other. Every man who has ever received instruction in the Philadelphia School of Anatomy should procure a copy.

Cerebro-Spinal Meningitis. Report to the State Board of Health upon an Epidemic in Monroe and Lenawee Counties, Michigan,

and a study of some other facts relative to the cause of the disease. By HENRY B. Baker, M.D., Secretary of the Board.

Dr. Baker, in his report, gives an exceedingly interesting history of this disease as it prevailed in a portion of the State of Michigan, with a summary of its history in other places, and the opinions of leading sanitarians and physicians as to its cause, symptoms, and course of the disease, with its treatment. In connection with this disease, the therapeutics of ergot is very fully discussed, as is also the question as to whether that agent has anything to do, directly or indirectly, in causing cerebro-spinal meningitis. The similarity between the symptoms of ergotism and cerebro-spinal meningitis are clearly shown, after which the following conclusions are drawn by the author: That it is extremely probable, but not yet proved, that any substance or agency which causes unusual contraction of the non-striate muscular tissue throughout the body, is capable of being a prominent cause, and any substance, agent, bodily position, condition, sensation, or emotion, which tends to produce general muscular tension, or otherwise to force unduly the blood into the blood-vessels of the brain and spinal cord, is capable of contributing to the production of this disease.

A Series of Clinical Lectures. Edited by E. C. SEGUIN, M.D. G. P. Putnam's Sons, Publishers, New York. No. II., on Acute Rheumatism in Infancy and Childhood, by A. JACOBI, M.D., and No. III., on Pneumo-Thorax, by AUSTIN FLINT, Sen., M.D.

These lectures fully realize our anticipations, in giving an epitome of the subjects treated on by the respective lecturers. The names of the authors are a guaranty that they are both practical and up to the times.

For sale by Robert Clarke & Co. Price 40 cents each.

Obituary.

The late Dr. Fore—Action of the Medical Profession.—At a meeting of the members of the medical profession of this city, held March 23, 1875, to express the feeling of the profession on the death of the late Prior G. Fore, M.D., Dr. M. B. Wright was called to the chair, and Dr. B. F. Stevenson was appointed secretary.

On motion, Drs. Wm. H. Mussey, C. G. Comegys, and C. S. Muscroft were appointed a committee to draft resolutions expressive of the sense of the meeting. The following was the report of the committee :

“ *Whereas*, It has pleased Divine Providence to remove from his earthly labors our brother and fellow-practitioner, Prior G. Fore, M.D.; therefore,

“ *Resolved*, That we have lost a most worthy member, who was high-toned in his relations to the profession, an example of diligence, probity, energy, and success.

“ *Resolved*, That we deplore his loss, and hereby tender our condolence to his family.

“ *Resolved*, That we will attend the funeral in a body.

“ *Resolved*, That a copy of these resolutions be furnished to the family of the deceased, and that they be published in the daily papers, and also in the medical journals of the city.

“ WILLIAM H. MUSSEY, M.D.

“ C. G. COMEGYS, M.D.

“ C. S. MUSCROFT, M.D.”

After the adoption of the report of the committee, Dr. M. B. Wright read to the meeting a short memoir of Dr. Fore, and was followed by Drs. William H. Mussey, John Murphy, and Ludlow, in eulogistic remarks on the life, personal and professional character of Dr. Fore. Dr. Wright's remarks were as follows :

“ GENTLEMEN :—Again we have assembled to pay the last tribute of respect to a departed brother. One by one the old sentinels, who never faltered in duty, are cut down by insatiable death. Soon, very soon, none will be left to recount the deeds of the past. It is a mournful reflection, but it carries with it, if well heeded, a profitable lesson. For many years Dr. Fore has been on the retired list, from physical disability rather than choice. His

mind sought other channels for pleasure and profit, but often, in conversation with myself, he became excited with enthusiasm in recounting the triumphs of the profession—in dwelling upon the inestimable amount of sorrow and suffering that had been alleviated, and the many whose lives had been spared for further usefulness. His early trials, and dangers, and disappointments, as well as encouraging successes, all came up vividly before him, and he seemed to live over again the pleasures and pains of the past.

“Not only was he interested in the scientific progress of the profession, but its morals were to him a pleasant and fruitful theme. The love of bickering, he designated as low-born and low-bred. Having stepped above medical strife—having no fierce rivals to encounter—he could calmly estimate the evils resulting from personal contention. He had his strong and weak partialities for men and things, and it may be his dislikes; but he never withheld his admiration of a man whose eye was steadily directed, and whose efforts tended to a higher sphere.

“During his earlier years of practice, when provision for the sick poor was less ample than at the present time, he rendered an immense amount of gratuitous service, and he has often remarked that the world would never know the many silent, unrequited efforts extended by the profession to the needy. On more than one occasion I called on Dr. Fore for contributions in aid of the widows of deceased physicians. He never turned me away empty. At one time he gave liberally, and then said, “If you should need more, call and see me again.”

“Soon after my arrival in Cincinnati I was called in consultation with the Doctor, and from that time on, our relations have been friendly. I mention it to say that, so far as I was capable of judging, he had a clear knowledge of the prevailing diseases of the country, and was successful in their treatment. This success was attributable in no small degree to his close watching and faithful attendance upon the sick.

“It is probable that Dr. Fore never had what might be called a vigorous constitution. But the labor he performed in his palmy days, night and day, was sufficient to have crippled the energies of almost any man, and it was painfully evident in his later days.

“There are individuals now in active life who indulge in grateful recollections of his kindness, and bestow upon him a due meed of praise. He fell not in the harness, but with good wishes for those who are struggling on.”

THE CINCINNATI

LANCET AND OBSERVER.

J. C. CULBERTSON, M.D., Editor.

VOL. XVIII.—JUNE, 1875—No. 6.

Original Communications.

Art. 1.—Scarlet Fever in the United States.

A Study of the Mortality Statistics of the Ninth Census, including an inquiry as to the seeming effect of Geographical Position, Temperature, and Altitude on the Disease. By THOMAS C. MINOR, M.D., Cincinnati, Ohio.

“Rien n'a été plus vivement contesté que l'utilité de la statistique dans les sciences médicales. . . . Parmi les médecins les uns suivent docilement les leçons de leurs prédécesseurs et les autres tentant aventureusement des voies nouvelles. . . . Tous en générale, font de la statistique, mais les uns confient leurs résultats à la mémoire les autres au papier.”
QUETELET.

SYNONYMS.—Scarlet Fever, Rash Fever (English); Fievre Rouge, Scarlatine (French); Scharlach fieber, Scharlach aufschlag (German); Scarlatina (Italian); Escarlatina (Spanish). Also, Gut-turus morbus epidemicus Foresti; Exanthesis Rosalia; Scarlata; Febris scarlatina; Morbilli confluentes; Rubeola rossallia; Febris rubra; Febris miliaris rubra et maligna; Febris anginosa miliaris.

Fevers of some kind prevail at times in all known parts of the universe. These fevers vary as regards type. They may be contagious or non-contagious, or yet again infectious. They may

depend on known or unknown causes. They may be modified by certain influences, such as temperature, altitude, or telluro-atmospheric conditions. They may prevail as epidemics, endemics, or yet again sporadically. Thus we know that typhus fever and yellow fever differ in type; that typhoid fever is contagious, while intermittent fever is non-contagious; that some forms of exanthematous fevers are dependent on a specific poison, capable of being reproduced by inoculation, while various forms of ephemeral fever are dependent on no known cause. We know that a low temperature and yellow fever together is a thing impossible; that a residence beyond certain altitudes produces anæmia, or, as sometimes occurs in Mexico, a tendency toward meningitis; that cretinism and goitre flourish over calcareous magnesian formations; that a high temperature, with stagnant water and a great amount of decaying vegetation, tends to produce malarial fevers.

A celebrated writer remarks: "Civilization has diminished the frequency and intensity of epidemics." This remark may be true as regards the dreaded plague, the Irish typhus, and the scurvy once so common. The application of discovered remedies has caused the almost total disappearance of many diseases that during the middle ages carried death and destruction to thousands. Thus, Jenner's discovery of vaccination as a preventive of variola; the discovery of Le Febvre that the "Dry Colic" was dependent on lead-poisoning; the discovery that mercury was the specific against the Neapolitan plague; the discovery that vegetables and limes would prevent scurvy; that the drainage of swamps would drive away intermittents, etc. In the meantime, a disease which annually carries off its myriads of victims, in place of *diminishing*, has become, if anything, more prevalent. I allude to *scarlatina*. There is reason to believe that if the adult population had been always equal sufferers with the infantile population from the disease, that long before this time preventive medicine would have greatly decreased the mortality from this scourge.

It is by the constant study of a disease that we become more fully acquainted with its habits, so to speak. In this way we learn to anticipate its movements, to know what agrees with it, and what disagrees with it. No better way to study a disease, then, than from a large number of cases, widely scattered and subject to many different influences. It is the writer's intention in this paper to study the statistics of scarlet fever in the United States, as shown by the census of 1870.

Since the English astronomer, Halley, in the year 1693, constructed the first mortality tables, the study of vital statistics has become wide-spread, and its importance can not be overestimated. In the meantime, there are medical men who contend that the conclusions drawn from medical statistics are valueless, and this notwithstanding the fact that many of the best established physiological, pathological, and therapeutical discoveries of modern times are based exclusively upon the study of such statistics. Intricate and difficult medical problems have been solved, and subjects once hidden under the heavy veil of theory have become demonstrable facts, simply through the careful analysis of that which, at a first glance, may have seemed to be but a chaotic mass of meaningless figures.

In therapeutics, every new remedy must have been used in a certain number of cases before its absolute properties can be determined. In pathology, the lesion most characteristic of any form of disease must be demonstrated in the dead-room in a certain number of cases, before it becomes an accepted truth to the pathologist. In physiology, all experiments must be repeated in a number of cases, before they can be regarded as of any definite value. In surgery, it is a notorious fact that the most commonly performed operations are those which show the lowest percentage of mortality; the difference of pulse rate and respiration in infancy and old age, and in the different sexes; the age of puberty and primary ovulation, as modified by race and climate; the influence of climate on fecundity; the fact that early marriage produces sterility and short-lived children; that libertinage begets sterility; that free institutions and virtuous habits beget fecundity; that natural causes, such as sex, age, season, hour of the day, etc., react on mankind: thus we see that the majority of births occur at night; of deaths in the early part of the day; that the death rate at different ages varies; that some occupations and professions are more healthy than others; that climate influences physical development; that climate influences some diseases: thus we know that at certain latitudes and altitudes intermittent and yellow fever never occur; that cholera is never seen in Iceland, Siberia, Greenland, or Australia; that phthisis is never seen in Iceland, and only rarely in Norway, Madras, or the elevated plains or pampas of Mexico. These, and innumerable other important facts, are based almost solely on the study of statistics. In the face of such evidence it requires more than ordinary *assumption* to declare that

vital statistics are valueless, and that the life-long labors of such men as Malthus, Bicker, Hofacker, Hawkins, Benoiston, Villermé, Sadler, Susasmilch, Guizot—names so frequently mentioned by Quetelet,* to whose superb work I am indebted for many valuable statistical facts—have amounted to nothing. As well might it be claimed that the statistical researches and investigations of Boudin, Armand, Rochard, Rey, Johnston, Duncan, Kennedy, Simpson, Tulloch, and in our own country, of Walker, Smith, Harris, and Snow, have been useless. In the analysis of the scarlatina statistics of 1870 that follows, it is not likely that any great amount of light will be thrown on the subject. Nevertheless, if there be only a few new points discovered, the writer will be satisfied and more than repaid for his labor. Asking the critical reader, if he doubts any conclusion arrived at, to simply go over the same ground in the same manner, and see whether or no our deductions be identical, I now enter into the study of the subject, first, however, by way of introduction, giving a short historical sketch of the disease, together with its geographical distribution over the surface of the globe.

HISTORICAL.—There seems to be much doubt as to whether the ancient medical writers knew anything regarding the disease called scarlatina. For many years, it is certain that the disease was supposed to be but a species of measles. It is claimed by many modern authors that Ingrassias was the first physician who noticed that measles and scarlatina were two different and separate affections. Ingrassias called the disease *Rossaniam*, and all medical historical writers quote the well-known passage, "*Nonnulli morbillos et rossaniam eundem esse morbum existimarunt: nos ipse nostrismet oculis diversos eorum affectus esse videmus; morbilli enim racematim venire solent.*" (*De tumoribus præt. natur.*, cap. 1, p. 194, 1556.)†

The oldest medical monograph on the subject of scarlatina dates from 1578, and was written by a French physician named Jean Coyttar. Yet, again, some medical writers claim that Sennert made the first *clear mention* of the disease, during an epidemic he observed at Wittenburg in the year 1619. Quotations are used from Sennert's work to prove the point. (Sennert, *Opera Medica*, t. vi.,

* *Physique Sociale*, Ad Quetelet, St. Petersburg, 1869.

† *Dictionnaire de Médecine ou Répertoire Général des Sciences Médicales*, Vol. XXVIII., p. 152, Paris, 1844.

lib. iv., cap. 12, p. 483, seq.)* Gregory states that, "In the year 1610, an epidemic angina, with scarlet eruption, raged in Spain, from which country it passed over, in 1618, to Naples, then governed by a Spanish viceroy. We naturally look, therefore, to Spanish and Italian authors for the first description of the anginose or malignant scarlet fever. The early Spanish writers are Ludovicus Mercatus (1612) and Michel Heredia (1626). The latter is particularly full and clear in his descriptions. The Italian authors are Sgambatus, "*de pestilente faucium affectu Neapoli sæviante*" (1620)† Also, Oetius Clerus, "*de morbo strangulatoris*" (1636). Prior to 1800, at least forty different monographs were written on scarlatina. The various complications of the disease were noted and accurately described. It was also noticed that the type of the disease varied during different epidemics. Thus, according to French writers (refer to Dictionnaire de Medecine, p. 167), some epidemics were noted for their mildness; for instance, "those of London, observed by Sydenham, from 1661 to 1675; that of Yorkshire, cited by Ozanam, during which only seven deaths occurred out of one hundred and sixty-one cases; that of Copenhagen (Meza, 1787), in which the exanthemata was the most often without prodroma, and without tonsillitis." Some particular symptoms were noticed in various epidemics; thus, in that of Essex there was "severe pain in the occiput (Bruning, 1770;) that of Entrecastreaux, in the department of Var, by attacks of remittent fever (Fauchier, 1809;) that of Upsal and Stockholm (1741-42, Rosen), by hiccough; that of Nantes (1817, Olivier Mairy), by colics and tenesmus; that of the Isle of Cephalonia (1763, Angelo Zulatto), by a complicating affection of worms; that of Dresden (Ammon), by strangury at the commencement, among young patients. Finally, several epidemics were remarkable for the frequency of anasarca (1787, Christ. Gottlin, Hoffman; 1809, Torrence, in England); others by the presence of mumps and buboes (1672-1689, Morton, of London); by swelling of the neck (1840, Vose, at Liverpool); by ulceration of the genitals (1748-49, La Hague); by gangrene of the throat and surface of the body (Cullen); by gangrene of blistered surfaces and leech bites (in Virginia); by the extreme gravity of the disease among women confined (1801, Joseph Frank, at the General Hospital of

* Traite de Géographie et des Statistique Médeciales. Par J. Ch. M. Boudin. Tome 11, p. 685.

† Lectures on Eruptive Fevers. George Gregory, New York, 1851, p. 147.

Vienna); by the rapidity of death (1775, Eischel at Copenhagen).” The reader, inclined still further to pursue the historical part of the subject, is referred to the bibliographical references before given. We shall now turn to the consideration of the medical geography of the disease.

GEOGRAPHICAL DISTRIBUTION OF SCARLATINA.—In the absence of any special work of reference regarding this subject, I am constrained to present such material as I have been able to glean from a careful perusal of various medical geographies. The notices of scarlatina are but few and far between in these works; and the indulgence of the reader is requested for the seemingly incomplete manner in which the material is arranged. I have used, as far as possible, quotations from the various authors, and have also given, in addition, the reference after each quotation. I am certain, however, that no fuller note is extant regarding the geographical distribution of the disease, than this one, now for the first time offered to the reader. It will be observed that we have chosen for a starting point the West Indies.

SCARLATINA AT THE ANTILLES.—In Cuba, St. Domingo, Jamaica, Martinique, and Guadalupe, and the numerous small islands that go to make up the Antilles, scarlatina is sometimes observed in a mild form. An epidemic occurred at Kingston, Jamaica, in 1842.* Rey remarks that at the Antilles, “Epidemics of scarlatina do not present the seasonary periodicity that we observe in the villages of Europe, and do not attain the same intensity.” (Rey, p. 103.)† Armand states that at Guadalupe it is seldom or never seen. (Armand.)‡ At the village of St. Pierre, in Martinique, there was an epidemic of scarlatina in 1836. Up to 1856 it had not re-occurred.

MEXICO.—In Mexico, in May, a month always remarkable for its dryness and high temperature, scarlatina is frequent. (Rey, *Ib.* p. 87.)

CENTRAL AMERICA.—In the absence of reliable statistics, we are led to think that scarlatina seldom or never occurs in Central America. No authorities consulted even mention the disease.

SOUTH AMERICA.—The disease is wide spread in this part of the globe. Rochard§ states that the nomad tribes of Indians who in-

* American Journal Medical Sciences, 1842, p. 256.

† *Geographie Medicale-Nouveau Dictionnaire*, Paris, 1872.

‡ *Traite de Climatologie Generale du Globe*. Paris, 1873.

§ *Climat. Dictionnaire de Medecine*, Paris, 1868.

habit the plains of Guiana suffer from scarlatina. In Chili, "Scarlatina often prevails in an epidemic form; it showed itself for the first time in this form at Valparaiso in 1827, when it made great ravages" (Rey). At Santiago, it is prevalent (Lagorde). "Epidemics of scarlatina prevail as often at Valparaiso as in Chili" (Armand). In Peru, "measles and scarlatina prevail ordinarily at the same time as small-pox" (Rey, p. 232). "In Peru, measles and scarlatina are the satellites of variola" (Armand, p. 758). In the valley of the Plata, occupied by the Argentine Confederation, Uruguay, and Paraguay, epidemics of scarlatina are of yearly occurrence. "Scarlatina is frequent and more insidious than variola" (Rochard, p. 202). Says Rey, speaking of the diseases of La Plata: "Scarlatina and measles are the principal febrile diseases in eruptive form; they are more pernicious than in Europe, and prevail almost always in an epidemic state" (Rey, p. 241.) At Montevideo there were three epidemics of scarlatina from 1840 to 1850 (Saurel). In Brazil, scarlatina prevails at times (Rey, p. 238). Rochard also mentions the same fact. Says Thomas,* "According to D'Alves, scarlatina first appeared among the Brazilian Indians in 1828, and then occurred sporadically, but in the year 1833, and afterward, it raged with fearful intensity."

AFRICA.—At the Canary Isles, off the northwest coast of Africa, the principal one of which is Teneriffe, scarlatina is rarely ever seen; the same may be said regarding the island St. Helena (Armand). At Sierra Leone, on the western coast, "measles and scarlatina are unknown" (Rey, p. 118). At the Cape of Good Hope, "scarlatina unknown" (Rey, p. 247). At the Isle of Reunion, in the Mascarenha group, scarlatina occurs among Europeans, and is most often brought in ships (Rey). At Mauritius, scarlatina is endemic in the colony, and it becomes epidemic now and then (Rey). "Measles and scarlatina are very rare in Egypt" (Rochard, p. 137). At Mozambique, on the oriental side of Africa, there seems to be no scarlatina. At Madagascar rarely, if ever, any. In Senegal, Armand states that it is difficult to diagnose between measles and scarlatina at the commencement of the attack. In the meantime, it does not seem to have appeared epidemically among the blacks. In the dengue, that so frequently prevails in tropical countries, the appearance of an eruption closely resem-

*Ziemssens, *Cyclopedia of the Practice of Medicine*, article Scarlatina. Vol. II. New York, 1875.

bling scarlatina is one of the prominent symptoms. This disease goes by the name of the red exotic fever (*fièvre rouge exotique* at Senegal); Chinese fever; and in Brazil, South America, the *fièvre polka*; at Reunion, the red fever. The eruption ends on the Fifth day by desquamation, which may be "morbilliform or scarlatinous" (Armand). In the Southern States of this country, epidemics of dengue or break-bone fever have not been uncommon, and the new name of *tropical scarlatina* would not be inappropriate for it, as there seems to be an intimate connection between the two diseases. In Egypt, according to Armand, scarlatina is seldom seen, if we except the scarlatinous eruption appearing in dengue, which disease often occurs at Port Said. It is known there as the "date fever," as it occurs at the date harvest in the autumn. The dengue is always accompanied by a scarlatinous eruption.

ASIA.—In Arabia, Palgrave observed scarlatina at Nedjd (Armand, p. 150). In Syria and Mesopotamia, scarlatina is met with (Rey). In Turkey, scarlatina and measles are met with, but the first of these affections is much more rare than the second (Rochard, p. 188). Epidemics of scarlatina in Turkey occur in summer, the hot season at Constantinople (Rey). In Constantinople, it is often prevalent in July and August. In 1867, there was an epidemic of scarlatina in that city (Armand). Scarlatina is seen in Smyrna at times (Thomas). In Persia, "scarlatina shows itself, as in Europe," in its epidemic form (Tholozan, quoted by Rey). Epidemics of scarlatina appear frequently in Persia (Rochard, p. 151). In India, "The existence of scarlatina has not been demonstrated. There prevails, however, from time to time, a remittent fever accompanied by an eruption, but authors who have described it do not regard it as identical with the scarlatina of our climate" (Rochard, p. 92). A contrary view seems to be held by Thomas, who, quoting Maunsell and Cunningham, says, "Scarlatina attacked India, which had enjoyed immunity a long time." The writer has been unable to find any proof to substantiate this latter assertion, and if there have been any epidemics among the natives of India, I have not yet found such records. That European colonies sometimes suffer from the disease may be granted, but that scarlatina has become acclimatized there, is a matter to be doubted.

In Ceylon, "Scarlatina has never been seen. If we are to believe the researches made by English physicians, this disease has never been manifest in India" (Rey, p. 157). In Burmah, Java, and Sumatra, it is seldom or never seen (Armand).

CHINA.—Little or no scarlatina in Canton (Armand, p. 525). At Macao, "scarlatina and measles prevail as epidemics in February, March, and April" (Armand). No mention of scarlatina is made in speaking of Chusan, Ung Po, Fou Chow, Amoy, Shanghai, or Tche Fou. Among the French troops at the garrison of Tien-Sin in 1861, there were two deaths from the disease.

Scarlatina prevails as an epidemic at Pekin (Armand). "Eruptive fevers (scarlatina) are common in Pekin" (Rey, p. 337). At Macao, scarlatina frequently prevails in the winter season (Rey).

JAPAN.—At the island of Jesso, scarlatina is rarely seen. At the island of Kiou-Siou, according to Gaigneron, scarlatina is a very common disease (Armand, p. 791).

OCEANICA.—Scarlatina has been prevalent "since 1849 in Australia" (Thomas). At the Marquesas (Society Isles), "scarlatina and measles show themselves from time to time" (Rochard). At Tahiti, "scarlatina is sometimes severe" (Armand). In New Caledonia and Van Dieman's Land, it seems to be rare. "Scarlatina has never made a distinction between the several races and the natives of New Zealand" (Murchison, quoted by Thomas).

EUROPE.—From the time the disease was first noticed at Wittenberg, in 1619, up to the present day, scarlatina has been one of the plagues of Europe. There is not a country or province where the disease has not appeared. The medical literature regarding the subject is voluminous, and the notes and histories of epidemics are so numerous that the writer will only give in passing a few references. The disease may almost be said to be endemic in that quarter of the globe. Boudin speaks of epidemics occurring in Varsovia and Bréslau, in 1627, described by Doering, and also the following notable epidemics, with the names of the physicians who have described them subjoined:

"Silesia, 1642 (Winsler); Saxony, 1652 (Fehr); Poland, 1664 (Schultz); Edinburgh, 1680 (Sibbald); London, 1661, 1689 (Sydenham and Morton); Dresden, Wurtemberg, and Ulm, 1690, 1696; Berlin, 1716, 1720 (Gohl); Eisenach, 1717, 1741 (Stoerck); London, 1747 (Fothergill); Hague, 1748; France and Spain, 1751 (Navier); Plymouth, 1751, 1753 (Huxam); Vienna, 1757, 1759; Switzerland, 1761 (Tissot); Ionian Isles, 1763 (Zulatti); Stockholm, 1763; Vienna, 1770 (De Haen); Montpellier, 1765 (Sauvages); Rotterdam, 1777 (Bickes); Copenhagen, 1777 (De Meza); Genoa, 1784 (Corecelli); Magdeburg, 1795 (Sachte); Langres, 1820 (Robert); Wittenberg, 1801 (Kreysig); Aschaffenburg, 1812 (Reuss);

Prague, 1812 (Böhme); Marseilles, 1822 (Robert)." (See Boudin, Tome II., p. 686.) The same writer refers to scarlatina at Edinburgh, Leith, Glasgow, Dundee, Paisley, Greenwich, Aberdeen, and Perth, in Scotland. Thomas gives many notes of German epidemics, among which a few may be mentioned, occurring at the following points: Stuttgart, in 1846, 1853, 1856, 1862, 1867, 1868; in the Tyrol, 1847-48; Wurzburg, Bavaria, 1867; Dresden, Saxony, 1862; Königsberg, 1860, 1867; Berlin, Prussia, 1852, 1854, 1856 (Thomas). In Iceland, from 1827 to 1837, the absolute number of deaths from scarlatina was 119, or 0.8 out of every 100 deaths (Boudin). At Copenhagen, the disease is common (Ad Hannover); there was an epidemic in this town in 1864 (Thomas). "At Guernsey, scarlatina and measles are generally benign" (Rey, p. 266). At Brussels, in Belgium, according to Bertillon and Jansses (quoted by Rey), from 1862 to 1866, for one thousand general deaths, 13.4 were from scarlatina. The disease prevails as an epidemic every four or five years, at Bruges, in Flanders. In France, "We can not say that the disease is very frequent; during the year 1867 this disease showed itself in an epidemic state only in the departments of the Basse Alps, Calvados, Indre and Loire, Lot et Saronne, Moselle, and Seine et Oise" (Rey). In 1868, it prevailed as an epidemic in some departments. According to a table of Elys, from 1865 to 1869 the mean annual of deaths from scarlatina in Paris was 142. At Lyons, according to Merny and Quesnoy, during the years 1861-2-3, 47 persons died from scarlatina (Rey). At Paris, during the five years, 1865-69, "scarlatina had a mean average of 142 deaths per annum; that is to say, 0.78 per 1,000 inhabitants, and 3 for 1,000 deaths. There was quite an epidemic in 1868, and especially in 1869; we had 6 for 1,000 deaths, and 1.47 for 10,000 inhabitants. The season of July, August, and September gave the greatest mortality. Throughout France, epidemics occasionally occur" (Armand). In Russia, the Danubian province of Roumania suffers at times from scarlatina (Rey). In Italy, "Every year we see scarlatina prevailing in the form of slight epidemics in some communes of the province of Brescia. It shows itself, and more seriously, in the Neapolitan country. It is a mistake, nevertheless, that this eruptive fever presents itself in the south of Europe with the frequency and gravity that it acquires in England" (Rey, p. 301). In Switzerland, according to Marc D'Espine, from 1838 to 1855, the absolute number of deaths from scarlatina was 83, or 4.9 to every 1,000 deaths. At the Faroe Isles,

"scarlatina is unknown" (Rey, p. 372). At Malta, "measles and scarlatina are rare" (C. Ely, quoted by Rey).

GREAT BRITAIN.—English medical literature is replete with interesting statistics regarding the subject. It is not, however, our intention to give anything more than a few brief notes concerning the disease as it prevails in "our mother country." From a late number of the Practitioner,* we select the following extract: "The present prevalence of scarlet fever suggests the consideration of the status of this disease in the kingdom. It appears to be becoming, if it have not already become, supereminently the 'English plague.' During the twenty-one years, 1851-71, it killed, on an average, 18,400 persons yearly, and its annual mortality ranged from 9,000 to 32,500. Within this period there were five epidemics of the disease. The two earliest of these epidemics each lasted a year; the two next lasted each two years; the last epidemic extended over not less than four years. The first epidemic occurred in 1852, and killed 18,887 persons; the second in 1854, and killed 18,928; the third in 1858-59, and killed 43,021; the fourth in 1863-64, and killed 60,175; the fifth in 1868-71, and killed 100,663. The following are the figures of the mortality of the disease year by year:

YEAR.	DEATHS.	YEAR.	DEATHS.	YEAR.	DEATHS.
1851.....	13,634	1858.....	23,711	1865.....	17,700
1852.....	18,887	1859.....	19,310	1866.....	11,685
1853.....	15,699	1860.....	9,305	1867.....	12,300
1854.....	18,928	1861.....	9,077	1868.....	21,912
1855.....	16,229	1862.....	14,834	1869.....	27,641
1856.....	13,557	1863.....	30,475	1870.....	32,543
1857.....	12,646	1864.....	29,200	1871.....	18,567

Total..... 388,340

The remarkable development which the disease has undergone in the latter part of the period under consideration, as compared with the former part, will at once arrest attention." (Practitioner, *loc cit.*) In Ireland, "I have been able to have twelve distinctly recorded scarlatina years—1763, 1800, 1819, 1843, 1845, and 1866" were the principal ones. So says Grimshaw of Dublin, who is quoted by Kennedy.†

* The Practitioner, No. 78. London, 1874, p. 452, et seq.

† Hospitalism and Zymotic Diseases. Evory Kennedy. London, 1869, p. 126.

Returning to nearer our own country again, we find that "scarlatina first appeared in Iceland in 1827; in Greenland in 1847-48" (Thomas). In British America, the disease is not uncommon, as, for instance, in Canada, Nova Scotia, and New Brunswick; while, according to Rey, it is rarely ever seen in Newfoundland. We shall now turn to the disease as it prevails in the United States.

UNITED STATES.—Scarlatina first appeared in North America, according to Thomas, in 1735. Boudin mentions epidemics in 1760-1770. It is more than likely that the disease occasionally showed itself during colonial times in the settlements of New England. It is only after the Revolution of 1776 that American medical literature seems to treat of the subject. In 1795 and 1796, an epidemic of scarlatina occurred at Leominster, Mass. Dr. Israel Allen seems to have been the author of the first American monograph on the subject, for he described the Leominster epidemic in a book entitled "A Treatise on the Scarlatina Anginosa, by Israel Allen, M.D., Leomister, Mass., 1796." It is possible there may have been earlier writers. I have only been able to find the annexed references from the work of Dr. Joseph M. Toner, who names the following early epidemics of scarlatina occurring in America:

"*Scarlatina*.—Connecticut, 1751, 1793, 1794; Vermont, 1787, 1793, 1796, 1797; Windsor, Bethel, Stockbridge, Barnard, Royalton, Woodstock, Randolph, 1795; Philadelphia, 1746, 1764, 1783, 1789, 1793, 1794; Kingston, Mass., 1735; Boston, 1702, 1735, 1795; Ulster, 1785; New England, 1787; New Haven, 1793, 1794; New York, 1792, 1793, 1794; Salem, Mass., 1783; Charlestown, 1784; North Fairfield, 1793; Massachusetts, 1793, 1796; Hartford, 1794; New Hampshire, Me., 1796; Bethlehem, Conn., 1792, 1793, 1794; Litchfield, 1793; New Jersey, Red Brook, 1789."*

Epidemics of scarlatina have occurred in every State and Territory in the Union. It is more than probable that the epidemics of 1790 became pandemic, for we see that within the succeeding five years it was noticed not only in New England, but in the Mississippi Valley—the latter, a fact recorded by Drake,* who noticed it at Washington, Ky. I am also satisfied, from a careful investiga-

* Contributions to the Annals of Medical Progress and Medical Education in the United States. Washington, 1874, p. 94.

*The Principal Disease of the Interior Valley of North America. By Daniel Drake, of Cincinnati. Philadelphia, 1854, p. 595.

tion of the numerous histories of what were considered to be local epidemics, that the disease again became pandemic in or about 1830, and prevailed at numerous points until 1840. Again, there seems to have been another epidemic tendency prevailing through the different States from 1850 to 1854. The chain of evidence on which these conclusions are based will be furnished when I give the histories of scarlatina epidemics in the different States. In the meantime, as Drake noticed twenty years ago, the local epidemics of scarlatina occur almost wholly in those States "north of the 33d degree of latitude,"—a fact which will be again conclusively demonstrated, if reference is made to the census statistics of 1860 and 1870, as will be shown ere the close of this article. Since 1870, scarlatina has again assumed an epidemic form in the United States.

If the reader will carefully follow the references made to various portions of the globe, several points will be noticed :

1. The zone of comparative immunity in the eastern hemisphere extends from 10° south latitude to 20° north latitude.

2. A zone of comparative immunity in the western hemisphere extends from the equator to 10° north latitude.

3. Another zone of comparative immunity in the western hemisphere extends from 30° to 35° north latitude.

4. In times of pandemics, occasional epidemics occur at points within the zones of comparative immunity.

5. When scarlatina epidemics occur within the zones of comparative immunity, the disease attacks by preference the Caucasian race.

6. The outbreak of such epidemics in the zones marked first and second can always be accounted for by the arrival of ships having the disease aboard. Scarlatina can then be said to be imported within these zones, and having exhausted itself on the European settlers, the disease fails to become acclimatized, and dies out completely for long intervals of time.

7. In the zone marked third, the disease almost always exists in a sporadic form; it only becomes epidemic when it is pandemic in the higher latitudes.

We find the following countries are within these zones :

1st Zone : Sumatra, Borneo, India, and most of Africa.

2d Zone: Venezuela, and States of Colombo.

3d Zone : South Carolina, Georgia, Alabama, Mississippi, Louisiana, and Texas, with Northern Florida, in United States.

Scarlatina may then be said to be a *not uncommon disease* in Great Britain, Norway, Sweden, Denmark, France, Prussia, Austria, Russia, Italy, and Spain; in Turkey, Northern Arabia, Persia, China, Japan, Australia, and New Zealand; in Peru, Bolivia, Chili, Argentine Confederation, Uruguay, Paraguay, and Brazil; in Canada, the Eastern, Middle, and Western States of America, and in Mexico.

The character of the climate in the zones of comparative immunity may be thus briefly stated: Lying for the most part in the tropics and near the equator, exposed to the direct rays of the sun, a *high mean annual temperature* is of course noticeable.

Again, the zones of comparative immunity from scarlatina are the points where the lowest forms of *malarial fevers are common*. Yet, again, these zones being near the equator, are subject to the *heavy periodical rain-falls* of the tropics, and have at times an atmosphere fairly *saturated with humidity*.

We are led to conclude for these reasons, that *a very high temperature, combined with a periodically humid atmosphere, is unfavorable to the development of any scarlatinous tendency*.

Leaving this subject for the present, I shall now turn to the consideration of the disease as it has prevailed in the United States. Through correspondence with a number of health offices, scattered over various sections of the country, I have been enabled to collate a mass of new statistics. These mortality statistics will be carefully studied as we proceed, taking up the States one by one, and analyzing the records furnished by the ninth census. In addition, numerous notices of American epidemics of scarlatina, with the bibliographical references thereto, will be given.

The number of decedents from scarlatina and their respective ages, together with the seasons and months in which such deaths have occurred, are all matters especially noticed, and, besides, the seeming effects of altitude and temperature on the disease. The mortality from scarlatina in the principal cities of the United States has also been studied, and as far as possible I shall give general conclusions, deduced from a minute analysis of the entire subject viewed in all the various aspects I have heretofore enumerated. Commencing, then, with the New England section, we shall first study Maine.

SCARLATINA IN MAINE.—422 deaths occurred from scarlatina in Maine during the census year of 1870; 222 males, 200 females. 403 of the decedents were children—244 being under five years of

age. Season of greatest mortality, spring. Month of greatest mortality, March. Maximum and minimum temperature of the State at month of greatest mortality, 23° to 32° Fahr. Average altitude of State above the sea level, 375 feet.

Reflections.—Population in 1870 was 626,915; 67,707 of this population were children under five years of age. Out of every 278 children under five years of age, then, one died of scarlatina. Cold weather during month of greatest mortality. With one exception, the decedents were whites. Epidemics of scarlatina occur in the State from time to time. Dr. A. P. Fuller, of Fayette, Kennebec county, says: "The disease first made its appearance in Fayette, April, 1832."* Dr. Page, of Hallowell, says:† "Scarlatina commenced its attacks at Hallowell in the month of March last, and continued with unusual severity until the expiration of the year 1832."

NEW HAMPSHIRE.—Total deaths from scarlatina, 96; males 36, females 60. Fifty of the decedents were children under five years of age. Season of greatest mortality, spring. Month of greatest mortality, April. Maximum and minimum temperature, 42° and 37° Fahr. Average altitude of State above the sea level, 625 feet.

Reflections.—Population in 1870 was 318,300; 29,665 of the population were under five years of age. Out of every 593 children under five years of age, one died of scarlatina. Cool weather, month of greatest mortality. All the decedents were white. Epidemics of scarlatina occur in the State from time to time. Dr. Samuel Webber, of Charlestown, says: "From October, 1837, to July, 1838, scarlatina prevailed in this place."‡

VERMONT.—Total deaths from scarlatina, 54; males 32, females 22. Thirty-two of the decedents were under five years of age. Season of greatest mortality, spring. Month of greatest mortality, February. Maximum and minimum temperature, 20° to 15° Fahr. Average altitude of State above the sea level, 600 feet.

Reflections.—Population in 1870, 330,551; 37,363 of the population were under five years of age. Out of every 1,168 children under five years of age, one died of scarlatina. Cold weather, month of greatest mortality. Decedents all whites. Epidemics of scarlatina occasionally occur. Dr. David Gilbert, of Brattleboro,

* Boston Medical Journal, Vol. IX. (1833), p. 303.

† Boston Medical Journal, Vol. VII., p. 10.

‡ American Journal Medical Sciences, Vol. XXIII., p. 363.

writing in 1842, remarks: "Scarlet fever has been at times, for the last twelve years, very prevalent in the region where I have resided."*

RHODE ISLAND.—Deaths from scarlatina, 186; males 101, females 85. 118 of the decedents were under five years of age. Autumn and winter were the seasons of greatest mortality. Month of greatest mortality was December. Maximum and minimum temperature, 34° to 29° Fahr. Average altitude of State above the level of the sea, 125 feet.

Reflections.—Population in 1870, 213,253; 23,288 of this population were children under five years of age. Out of every 198 children under five years of age, one died of scarlatina. Cold weather during month of greatest mortality. With four exceptions the decedents were whites. Epidemics of scarlatina frequently occur in Rhode Island. Dr. S. O. Griffins of Burrissville,† gives the history of an epidemic observed in that town in 1856. Dr. Charles Parsons, of Providence,‡ says of the mortality of the State from scarlatina: "The table shows that more deaths have been ascribed to scarlatina than to any other of this class of diseases. In the whole series of reports for ten years and seven months, there has been 1,088 deaths by scarlatina, or a little more than one in twenty of those from given causes."

Dr. Edwin M. Snow, of Providence,§ states: "With the exception of the three years—1856, 1864, and 1869—there were never more deaths from scarlatina, in any year in Providence, than in 1873. The disease prevailed with severity throughout the year, visiting one part of the city after another, and causing an unusual number of deaths in the summer season. The number of deaths in each month was as follows: In January, 8; February, 5; April, 6; May, 10; June, 11; July, 10; August, 12; September, 17; October, 9; November, 15; December, 23. 'Total, 132.'"

[TO BE CONTINUED.]

* Boston Medical and Surgical Journal, Vol. XXVI., p. 325.

† Transactions American Medical Association, Vol. XV.

‡ *Ib.*, 1864, p. 218.

§ Nineteenth Annual Report upon the Births, Marriages, and Deaths in the City of Providence, 1874, p. 61, et seq.

Art. 2.—Endometritis.

A paper read before the Oldham County (Ky.) Medical Society, by N. B. WELLS, M.D.

Mr. President and Gentlemen:—Since my appointment to read an essay upon the above subject, my time has been so occupied professionally, that I have had but little opportunity for preparing it. In the meantime, it has been my ardent desire to present to you a full, comprehensive, and *practical* epitome of the subject, fully abreast of our latest and most trustworthy authorities on the subject.

I have been compelled therefore, in consequence of my limited time and opportunities, to draw so very heavily upon such authorities as were within my reach, both in *matter* and *verbiage*, as to render, this essay little more than a collation or compilation from them.

In treating of the diseases of any organ of the human body, it is self-evident that we should first consider the natural structures and functions of that organ; in other words, in order to the proper understanding of the pathological anatomy of any organ and the diseased actions attendant thereon, we must first study the healthy anatomy and healthy functions of it. Therefore, in approaching the disease assigned me, as a proper subject for an essay at this meeting, I deem it proper, first, to pass in review the anatomy and physiology of the cavity of the uterus. The term endometritis is derived from the Greek word *endon*, *within*, and *metritis*, *inflammation of the uterus*, or "*inflammation of the lining membrane of the uterus*."

The uterus or womb is the organ of gestation. It is situated in the cavity of the pelvis, in the median line, between the bladder and the rectum, and is retained in that position by the round and broad ligament on each side, and by the upper end of the vagina below. The cavity of the uterus is extremely small in comparison with the size of the organ; its figure is that of a curvilinear triangle; its walls are in contact, and are smooth and covered with a layer of mucus. The cavity of the body of the uterus is of a triangular form, and has an opening at each angle. The inferior opening (os internum) establishes a free communication between the cavities of the body and neck; it is often obliterated in old women. The other two orifices are those of the Fallopian

tubes; they are scarcely visible to the naked eye, and are situated at the bottom of two funnel-shaped cavities formed at the superior angles of the uterus, and forming the remains of the division of the body of the uterus into two halves or cornua.

The cavity of the neck represents a cylinder flattened from before backward, and has upon its anterior and posterior wall certain ridges, which form upon each wall along the whole length of the neck a tolerably regular median column, from which proceed, at more or less acute angles, a certain number of smaller columns, which project to a greater or less degree. The whole appearance resembles, according to Cruveilhier, that of a *fern-leaf*, and has been called the *arbor-vitæ*. It generally disappears after the first labor, at least only traces of it are left. Nevertheless, it is not unfrequently found perfect, even after several accouchements—a circumstance of some importance in legal medicine. According to Cruveilhier, the internal surface of the body of the uterus is much more vascular than the neck. This difference is particularly observed, he says, in females who have died during a menstrual period, in whom the vessels of the body of the womb are much developed, and that organ itself is swollen and softened, while the cervix retains its accustomed whiteness and consistence.

Another characteristic of the uterine cavity is the existence of a greater or less number of transparent vesicles, which were mistaken by Naboth for *ova*, but are only muciferous follicles. They exist both in the body and neck of the uterus, but are more numerous in the neck, near the vaginal orifice, and only become apparent when the mucus accumulates in them from obliteration of their orifices. They are sometimes much enlarged, and have then given rise to the opinion that some more serious disease existed. The orifices of the uterine sinuses, described by the older anatomists, at the fundus of the uterus, can not be detected. They are only to be seen after delivery, in the situation where the placenta had been attached.

The existence of a mucous membrane upon the internal surface of the uterus has been denied by those anatomists who have examined it after parturition, especially by Morgagni and Chaussier, and so by those who do not admit the presence of a mucous membrane unless it can be demonstrated over a certain space.

But the existence of a mucous membrane on the internal surface of the uterus seems to be proven by the following considerations, viz: First. Every organized cavity which communicates with the

exterior is lined by a mucous membrane, why, therefore, should the uterus form an exception to this rule? Secondly. By dissection, it is shown that the mucous membrane of the vagina is continued into the neck of the uterus, and thence into the body; but in this latter situation it is destitute of epithelium. Thirdly. It is extremely vascular, and presents a capillary network of the same appearance as that of the other mucous membranes; and lastly, it is constantly lubricated with mucus.

Pathological observations also show that the internal surface of the uterus, like all mucous membranes, is liable to spontaneous hemorrhages from exhalation, without breach of continuity; to catarrhic secretions, and to those growths which are denominated *mucous*, *vesicular*, and *fibrous* polypi; and it is generally admitted that, where there is an identity of disease, there is also identity of structure. This lining membrane of the uterus is of peculiar interest to us with reference to the puerperal state, and the diseases that often arise in consequence of that state. Therefore, I think it a matter of sufficient importance to continue the review of this subject a little further, before broaching the subject of the disease in hand.

And first, we are taught by anatomists that during pregnancy, the elements of this lining membrane are separated; the vessels become penicillate and greatly increased in size; but in proportion as the uterus returns to its original dimensions, the mucous membrane regains its primitive form, and its dissociated elements approach each other. It seems as if this membrane was destroyed by a true exfoliation, and then entirely reproduced. The arteries of the uterus are derived from two sources—the principal, called the uterine, arise from the hypogastric; the others proceed from the spermatic or ovarian arteries to the borders of the uterus, and are distributed upon it. Both sets are very tortuous.

The veins are remarkable for their enormous size during pregnancy and after parturition. The lymphatics, which have been well examined only during pregnancy and after parturition, are, like the veins, extremely large, and have been often seen full of pus. The above views of the anatomy of the uterus I have gathered from Cruveilhier, who is perhaps one of the highest authorities on the subject. You will remember he says that the lining membrane of the cavity of the uterus is more vascular than that of the cervix uteri.

It will be interesting to state on this point that Dr. James Henry

Bennett, of London, differs from the great French anatomist on this question. I quote from him as follows :

“The mucous membrane lining the cavity of the uterus is in an elementary condition; so obscure, indeed, that its very existence has been denied by many anatomists. Such, on the contrary, is very far from being the case with the mucous membrane which lines the cavity of the cervix, the os uteri, and the cervix itself. The latter is dense, vascular, well organized, forms numerous transverse folds, and is easily demonstrable. It presents, moreover, a large number of mucous follicles, endowed with considerable functional activity. As a necessary result of this anatomical difference in structure, the mucous membrane of the cavity of the uterus is *rarely* affected with inflammation, whereas that of the cavity of the cervix is *very liable* to inflammation. . . . The uterine cavity is not, as it is generally described, a *single* cavity, reached by a channel or passage through the neck, but a double cavity; one belonging to the uterus itself, and the other to the uterine neck, and each dissimilar to the other.

“At the union of the two cavities there is during life a natural stricture or coarctation, which closes the cavity of the uterus. This coarctation, which is not mentioned or described by anatomists, generally exists nearly always, or quite always, in the absence of disease, and is sufficiently great, except soon after parturition, and sometimes for a few days after menstruation, to prevent even a small sound penetrating into the uterus, unless considerable force be used. When the mucous membrane of these cavities is inflamed, this sphincter becomes relaxed, and then the uterine probe passes into the uterine cavity.”

On directing our attention to the physiology of the uterus, we find that, throughout its entire period of vital activity, the non-pregnant organ has an important function to perform—that of menstruation. The function of menstruation consists in the periodical secretion or excretion, during a variable time, of a certain quantity of blood from the uterine cavity, this secretion of blood coinciding with the separation of a mature ovum from the ovary. The act of menstruation is preceded, accompanied, and followed by determination of blood to the uterine organs, by a kind of “*molimen hæmorrhagicum*.” If a healthy female is examined instrumentally, a day or so before the appearance of the menses, while they are present, or a day or two after, the vaginal mucous membrane, and more especially the mucous membrane cov-

ering the cervix, is found turgid, and of a deep red color; thus presenting the incontrovertible evidence of a considerable degree of passive congestion. When uterine disease exists, this congested condition of the uterine organs extends over a much more lengthened period, both before and after menstruation. According to Dr. Bennett this menstrual "molimen hæmorrhagicum" must necessarily be greatest in the most vascular part of the uterus—that is, in the cervix—and its lining membrane, and the results furnished by ocular inspection render it evident that such is the case. As the periodical return of menstruation in the great majority of women takes place at the lunar month, or about every fourth week, and as the menses generally continue four or five days, we find that the menstrual "molimen hæmorrhagicum" must last with most women from seven to ten days, at the least. It thus appears that during very nearly one-third of each month, the uterus of a menstruated female, and especially the cervix, the most vitalized region, is physiologically in that condition which throughout the economy immediately precedes inflammation—viz., a state of congestion.

When, on the other hand, we consider that the arrest of a secretion from a congested organ, is one of the most frequent causes of inflammation, and how very many causes there are that can arrest or modify the menstrual flux, it need not be a source of surprise that inflammation should occur in the uterus and its neck apart from physical lesion, but rather a source of astonishment that it should not occur more frequently than it actually does. Dr. Bennett goes on to observe, that with some females the uterus seems to be naturally a weak organ. This peculiar delicacy of the uterine system is indicated by the difficulty with which menstruation is at first established, by its irregularity during the first year, by its scantiness or abundance, by the frequent presence of leucorrhœa, before and after menstruation—an indication of congestion of the uterine system—and by the existence of pain either for the first few days or for the entire period.

These peculiarities of menstruation, although apparently morbid, are evidently natural with some females, and quite compatible with the absence of disease of any kind. They characterize a *tribe*, as it were, of the human race—a class of females, who are more liable than others, in the course of their uterine life, to inflammatory diseases of the uterus, and to all the accidents to which these diseases give rise.

Our learned author goes on to say that these anatomical and physiological considerations explain how it is that inflammation of the neck of the uterus is a frequent, instead of a rare disease, as it is supposed to be by some of our most eminent uterine pathologists. He boldly affirms that inflammation of the body of the uterus in the unimpregnated state is, in truth, a rare disease; but inflammation of the *neck* of the uterus, on the contrary, is an exceedingly common one—so common, indeed, that the very great majority of women who apply for relief when laboring under uterine symptoms, physical or functional, will be found, on careful examination, to be suffering from its existence.

Leucorrhea, dysmenorrhea, menorrhagia, irritable uterus, prolapsus, etc., are generally studied independently of any such origin; but, in reality, in nineteen cases out of twenty, when confirmed, they are the immediate results of inflammatory disease of the cervix, and only to be effectually treated by attacking the primary disease, to which they owe their existence.

Leucorrhea, especially when chronic, and persisting during the entire interval of menstruation, is nearly always the result of inflammation and ulceration of the uterine neck; but a large proportion of the generally reputed functional diseases of the uterus will also be found, if submitted to severe scrutiny, assignable to the same cause. Most of the more intractable cases of dysmenorrhea, menorrhagia, irritable uterus, and amenorrhea, that are met with in practice, are the result of local inflammation. We do not include chlorosis and hysteria, because I believe that they are not diseases of the uterine system. Chlorosis is a disease of the blood, and the modifications which occur in menstruation are merely the result of debility and deficient sanguification. Hysteria is a disease of the nervous system, which is often occasioned by disease of the uterus, but which is not necessarily connected with it.

Irritable uterus is merely another name for inflammation of the cervix uteri. This is Dr. Bennett's language. All the symptoms which the older writers, such as Gooch and others, give as characterizing irritable uterus, may be referred without hesitation to the latter disease.

After having thus hastily gone over the *anatomy, physiology, and pathology* of the cavity of the uterus, we are better prepared to enter upon the subject of inflammation of that region. By internal metritis, or endometritis, or uterine catarrh, is meant inflammation of the mucuous membrane lining the cavity of the uterus.

I have thought fit in this essay to follow Dr. Jas. Henry Bennett very closely as to the anatomy and pathology of the uterine cavity. And as I know of no modern author who, after all that has been written and spoken on the subject, is a safer guide, I propose to follow him still further in his description and therapeutics of internal metritis.

It may be interesting, just here, to quote what Dr. Gaillard Thomas has said in regard to Dr. Bennett. After speaking in high praise of the labors of Prof. Jas. Y. Simpson, in the utilization of the uterine sound, sponge-tents, the speculum, etc., about the year 1843, he says:

"But Dr. Simpson was not alone in this work. Dr. James Henry Bennett, of London, at that time a young physician, who had for some years served as *interne* in the hospitals of Paris, returned to his own country imbued with the views which Récamier and Lisfranc had disseminated among a large circle of followers. In 1845, the first edition of his work on inflammation of the uterus appeared, and it is safe to say that no work of modern times, written upon any subject connected with our profession, has exerted a more *decided* and *profound* influence. Taking up the subject with a *vigor* and *energy* which forced attention, if not conviction, he produced an undeniable impression upon the profession, not only in his own country, but in Germany, France, and America. However others may differ from him, no candid mind can deny him the obligation under which he has placed his brethren by arousing their attention and directing their investigations into proper channels.

"The chief points insisted upon in his work are these: 1. That *inflammation* is the *primum mobile* in uterine affections, and that from it follow as results *displacements*, *ulcerations*, and affections of the appendages. 2. That menstrual troubles and leucorrhea are merely symptoms of this morbid state. 3. That in the vast majority of cases, inflammatory action will be found to confine itself to the cervical canal, and not to have affected the cavity of the body. 4. The propriety of attacking the disease in its habitat by strong caustics."

Much stress has of late years been laid on uterine catarrh by continental writers, and it has been described by some, not only as a very common disease, but also as the cause of most of the inflammatory and ulcerative affections of the cervix met with in practice. According to Dr. Bennett, however, such is not the case.

Internal metritis is a rare form of uterine inflammation, and has been considered common because it has been confounded with inflammation of the cavity of the cervix—a disease which, on the contrary, is very often met with.

The mucous membrane that lines the cavity of the cervix, as we have seen, instead of being rudimentary, like that which lines the uterine cavity, presents a certain thickness, is plaited in folds, is abundantly studded with mucous follicles, and presents a more extensive surface than the uterine mucous membrane. It is not generally known that the uterine cavity, in the unimpregnated state, is exceedingly limited in extent; so much so, indeed, that according to some authors, the uterus of a full-grown woman does not contain more than from *nine to eleven minims* of fluid. The cavity of the healthy cervix, if distended, contains about as much. The two cavities are distinctly separated from each other, as we have explained, by a constriction or natural sphincter, which has not been described by anatomists, but which is sufficiently powerful to offer a decided obstacle to the introduction of the uterine sound into the cavity of the uterus in the healthy state.

“The existence of this constriction,” says Dr. Bennett, “was first pointed out by Dr. Simpson, of Edinburgh, as an indication of disease; but subsequent researches led him to believe that it exists in the healthy state, and that it is not *necessarily* morbid even when carried to such an extent as to render the introduction of the uterine sound impossible. The cavity of the cervix is also deeper by half an inch than the uterus itself. The uterine sound, when passed into the uterus, is concealed to the extent of two inches and a half, of which one inch and a half occupies the cavity of the cervix, while one inch only is in the uterus.

“The above anatomical facts will at once explain the cause of the error into which even the latest continental writers on uterine catarrh have fallen. Whenever, on examining the cervix with the speculum, mucus is observed issuing from the os uteri, they conclude, without further examination, that it proceeds from the cavity of the uterus, and that the latter is the seat of the inflammation.”

Dr. Bennett then asserts that “the result of a careful examination of all the cases of inflammation of the cervix uteri that had come under his observation for three years, amounting to between five and six hundred, showed him that in the immense majority of cases the inflammation does not extend into the cavity of the uterus.” He then says:

"I have been led to this conclusion by the observation of the following facts:

"1. The dilatation which invariably *accompanies* inflammation of the cavity of the cervix does not, generally speaking, extend to the internal *constricted point*, or '*os internum*,' the latter remaining contracted, so as not to allow the free admission of the sound into the uterine cavity." 2. Therapeutical means carried so far as the morbid dilatation exists, or to the *os internum*, effectually cure the inflammation, and put a stop to the discharge. In some few cases, on the contrary, the '*os internum*' participates in the relaxation of the cervical cavity, so that the sound passes freely into the uterus. When this is noticed, the cavity of the uterus may or may not be inflamed. If it is, the discharge from the *os uteri* is more abundant, and presents peculiar characters; the local and general symptoms are rather different; and what is conclusive, therapeutical agents carried into the cavity of the cervix alone may not be sufficient to effect a cure. These latter cases are really cases of *internal metritis*, or uterine catarrh. The former, by far the more numerous, are regarded as cases of *cervical catarrh*.

All the causes which give rise to acute or chronic metritis, may also occasion internal metritis. It appears, however, to be generally met with in practice as the result of the lengthened existence of inflammatory disease of the cervix, and of its cavity. The inflammation gradually progresses along the cavity of the cervix until it reaches the *os internum*, and passes into the uterus. Indeed, considering the extreme frequency of inflammation of the entire cavity of the cervix, it is only surprising that the disease should so generally stop at the internal sphincter of that organ. The cause, however, according to our author, above quoted, of this clinical fact, is, no doubt, the change in the structure of the mucous membrane which commences at this point.

Among the causes most likely to give rise to *internal metritis*, a prominent position must be given to the inflammations that occur after parturition and abortion. When inflammation of the uterus follows the expulsion of the ovum, the surface on which the placenta was implanted, is peculiarly liable to be attacked, and the seeds of chronic inflammation of the uterine lining membrane may be thus sown. In some exceptional cases, blenorrhagic inflammation may be a cause of internal metritis, the inflammation gradually extending from the vagina to the cervix, to its cavity, and to that of the uterus.

Symptoms.—Internal metritis being nearly always complicated by inflammation of the cervix, of its cavity, or of the substance of the womb, its symptoms are rather difficult to unravel; so difficult, indeed, that I do not believe the task has yet been accomplished satisfactorily by any writer. Internal metritis may be said to exist to a certainty, if the os internum of the cervix is so completely open as to allow the uterine sound to pass freely into the uterine cavity; if that cavity is increased in size, and more sensitive, and if, likewise, there is a more or less abundant *sero-sanguinolent* discharge, accompanied by dull, deep-seated pain in the region of the uterus itself—that is, behind and slightly above the pubis—and by a certain amount of general febrile reaction. The sero-sanguinolent discharge is the most important of these symptoms; indeed, it may be said to be as characteristic of endometritis as the *rust-colored* expectoration is of *pneumonitis*. The presence of blood in the secretion from the inflamed mucous surfaces, is in both cases owing to the same cause, viz., the absence of an epithelial covering. The epithelium, as we showed at the start, ceases to exist in the cavity of the uterus, as in the cells of the lungs; and when this is the case, the blood-corpuscles exude in inflammation, and blood is expelled mingled with the secretion of the inflamed surface. This sanguinolent discharge, however, is not always present when there is inflammation of the interior of the uterus. It is only when the inflammation is severe, or in its period of greatest intensity, that it is observed. At the onset, in the period of decrease, and sometimes throughout the entire duration of the disease, the secretion may be merely muciform or puriform. When congestion alone remains, it may consist only of transparent mucus. If this be the case, it becomes more difficult to distinguish internal metritis from inflammation of the cavity of the cervix, in which the same discharges are present; in both, they may be seen issuing in a thick stream from the os uteri, when the cervix is brought into view with the speculum. We can then only be guided by the amount of the discharge, by the morbid dilatation of the os internum, and lastly, by certain symptoms elicited by the use of the uterine probe or the uterine sound. In all these cases, we, of course, make use of the speculum. We first make an examination by *touch*, which teaches us the *position* of the uterus. Then having introduced the speculum, we *bend* the probe so as to give it a curve proper for entrance into the cavity, and we pass it gently in. Now, according to Dr. Gaillard Thomas, “if the disease be confined to the cervix, the instrument will meet with

slight obstruction at the os internum, which will be dilated in case the affection has advanced beyond it—a fact which has been specially insisted upon by Dr. Henry Bennett. Passing the probe into the cavity of the body, it should be carried up to the fundus, which should be *gently struck by it*. Then it should be made to impinge with a slight degree of force upon the sides of the cavity. If the body be affected, this will give pain, which may last, as Dr. Thomas quotes from a patient, "*like toothache*," for half an hour, and the removal of the instrument will very likely be followed by a flow of mucus, and probably by one or two drops of blood. Should the disease be *cervical*, no pain will result from the exploration, and the removal of the probe will be followed by the escape neither of mucus nor of blood, unless improper force be used. So much for the signs elicited by the use of the probe. It is worthy of notice, moreover, that internal metritis is nearly always accompanied by a dull, aching pain in the back or ovarian regions, similar to that experienced in inflammation of the cervix, and by deep-seated pain in the region of the uterus. The uterus is generally rather swollen, enlarged, and sensitive to the touch, the entire organ being in a congested, irritable state. Internal metritis is often accompanied by a slight amount of febrile reaction, occurring at intervals, after exertion, instrumental interference, or at the monthly periods. The catamenia are often disordered, generally manifesting themselves more frequently and more abundantly, lasting longer, and being attended with more pain than usual. Sometimes the flow of blood is so great and so lengthened as to constitute flooding, and this is more especially observed, as might be anticipated, when the sero-sanguinolent discharge is present. With some patients, on the contrary, the menstrual secretion appears to be diminished; but in either case, it may be laid down as a rule that the disease is aggravated by the appearance of menstruation.

In addition to these symptoms, all the general sympathetic reactions which are observed in chronic metritis and in chronic inflammation of the cervix may be present. As internal metritis is generally complicated by these diseases, we may also have the peculiar symptoms which they present. In some rare instances, inflammation of the lining membrane of the uterus is followed by ulceration. When this is the case, the cavity of the uterus becomes considerably enlarged, and large quantities of *pus*, *blood*, and *mucus* collect within it, and are expelled through the *os uteri*.

Pathological Anatomy of Internal Metritis or Endometritis.—Dr.

Henry Bennett says he has often seen the surface of the uterine cavity presenting the anatomical evidences of inflammation, in patients who had died of puerperal inflammation at various periods after their confinement. The internal surface of the uterus was then red, swollen, congested, and covered with a thin coat of mucus; but he only once saw a uterus presenting evidences of this form of disease in the non-puerperal state. It was in a case of internal uterine ulceration observed by Dr. Hale Davis. The mucous membrane presented several large inflammatory ulcerations, situated on the internal surface of the uterine walls, and quite distinct from the cavity of the cervix, which appeared free from inflammation.

The above description has reference more directly to chronic endometritis, confined to the mucous lining. Dr. Bennett, I think, restricts this affection to the lining membrane of the body of the uterus, while Dr. Thomas divides the subject into two departments, viz: "Chronic corporeal endometritis" and "chronic cervical endometritis." I prefer Dr. Thomas' division of the subject.

Treatment.—Inasmuch as endometritis includes inflammation of the cavity of the cervix as well as inflammation of the cavity of the body, I deem it proper to treat upon their therapeutics separately.

From the fact that the cervix uteri and its cavity are the most accessible parts of the uterus, and consequently those to which local treatment is principally addressed, it is but natural that we should commence with the treatment of this region first.

I may here be permitted to premise that I shall merely apply to the diseases of these two regions, as elucidated in this essay, the laws which regulate the treatment of inflammation in other regions of the animal economy. The intimate nature of disease is the same in all similar tissues, although its modes of manifestation are varied; and when once the real nature of the morbid processes which take place in the uterus is brought to light, the appropriate treatment may, to a great extent, be deduced by analogy and reasoning from the general laws of therapeutics.

Simple inflammation of the neck of the uterus, limited to the mucous membrane covering the cervix and lining its cavity, in its incipient stage, and unaccompanied by ulceration or hypertrophy, may generally be subdued by the use of emollient or astringent injections, tepid baths, and rest, combined with attention to the state of the bowels and to the general health.

It is seldom, however, that the disease is seen in practice, in this, its elementary state. The discomfort experienced by the patient is so slight that she is scarcely ever aware that anything is wrong, and consequently does not complain. Even were she to seek advice, the absence of any marked uterine symptom would almost always prevent the existence of disease being detected. When inflammation has extended to the deeper tissues of the cervix, symptoms supervene which more imperatively call the attention of the patient to the uterus, and the existence of the morbid affection is thus often recognized in an early period of its existence. If the cervix has become even slightly hypertrophied and enlarged, the means above mentioned are scarcely sufficient to overcome the inflammation, and the application of *leeches* to the organ affected generally becomes advisable, or even necessary.

The use of nitrate of silver, in solution or solid, to the mucous membrane covering the cervix, or lining its cavity, is also often very beneficial. When the cavity of the cervix has been long inflamed, and an abundant transparent or purulent mucus issues from the os uteri, it is generally necessary to carry the remedies into the cervical cavity itself. The inflammation may subside without this being necessary, under the influence of the means used to subdue the inflammation of the cervix; but in chronic cases, this is rather the exception than the rule. "Indeed," as Dr. Bennet justly remarks, "not unfrequently the disease seems to take refuge, as it were, in the cervical cavity, and nothing short of strong cauterization of the inflamed surface is sufficient to overcome its tenacity."

But before attempting to apply any remedy to the cavity of the cervix, it will be indispensable to first cleanse it of all mucus, pus, or blood that may exist in it. Otherwise, the medicinal agent, whatever it may be, will be so diluted or neutralized, as to render it almost inert. In most cases, this local alterative treatment will be greatly facilitated by dilating the cervix by means of *sponge-tents* or *sea-tangle tents*. This not only exposes the canal to applications, but opens the way for escape of fluids, and by pressure exerts an alterative influence on the diseased membrane.

Should granular degeneration exist, it will be peculiarly applicable. The tent being removed, the canal should be cleansed of blood and mucus, which may be done by a small pledget of cotton wrapped around a staff of *whalebone* or some tough wood, eight or ten

inches long, and as large as a goose-quill, and tapering toward its extremity.

Another method of cleansing the cervix uteri, recommended by Dr. Gaillard Thomas, consists in the use of a syringe, with a nozzle four or five inches long, which may be worked by one hand; the thumb retracting the piston, while two fingers hold the body of this instrument. It is filled with water, which is thrown with violence against the os and cervix, the tip of the nozzle being in contact with the part to be cleansed. Care should be taken not to throw the fluid into the cavity of the uterus.

Those substances which have been found by experience to answer the best purpose in inflammation of the cavity of the cervix, are the following: *Nitrate of silver, iodine, chromic acid, carbolic acid, creasote, sulphate of copper, solution of persulphate of iron, tannin, and acetate of lead.*

It is not necessary to go into detail on the modes of application of these agents, as I know every member present is well posted on this subject, and can always devise means adequate to the emergency of every case.

Before concluding this part of the subject, I will add that "in choosing the caustic, the practitioner should bear in mind that one great objection to those of severe character is the liability of their *closing the cervix* by causing *cicatricial contraction*." And I will add here that I have had some two or three cases in which the walls of the cervix absolutely united and grew together, by the adhesive inflammation being set up as a result of the application of the nitrate of silver, and I was put to the trouble of forming an opening through the cervical canal with a sharp pointed instrument. In one case, especially, after re-establishing a cervical canal, I had to keep a piece of gum catheter in the cervix until it healed up, to prevent its growing up again.

Chromic acid is said to have the preference over the nitrate of silver, in that it does not produce contraction of the cervical canal.

Treatment of Chronic Corporeal Endometritis.—Like the cervix uteri, the body of the uterus is liable to inflammation of an acute and chronic character. We are not dealing now with inflammation of the parenchyma of the body, but with inflammation of the lining membrane of the womb proper.

Few points in uterine pathology have created more discussion of late years than this. Some excellent authorities, following the lead

of Dr. Henry Bennet, regard it of rare occurrence, while a large majority consider it quite common.

The pathology of this affection, like that of the same affection of the cervix uteri, shows it to be a glandular affection. The utricular follicles are the seat of the disorder, and it is to the exaggeration of their secretory functions that is due the uterine leucorrhœa, which constitutes one of its prominent symptoms.

Causes.—According to Dr. Gaillard Thomas, we have the following list of causes of this disease, viz :

Exposure during menstruation ; sudden checking of the menstrual flow ; obstruction to escape of menstrual blood ; abortion and parturition ; inflammation of the cervix ; acute corporeal metritis ; sexual intercourse ; injury from sounds, intra-uterine pessaries, and injuries resulting from attempts to produce abortion ; certain hæmic conditions, as those accompanying phthisis and exanthematous diseases ; tumors in the uterine cavity or walls.

Special attention should be given to sustaining and improving the general health of the patient, which will always show a marked tendency to depreciation.

Good diet, fresh air, systematic exercise, and avoidance of all circumstances calculated to depress the spirits or harass the mind, should be advised. Change of air and change of scene should be brought to our aid, and an occasional visit to some good watering-place should be encouraged. By this means the healthy condition of the sanguiferous and nervous systems will be fostered ; and should medicinal agents be required, *iron, the mineral acids, quinine*, the bromide of potassium, or *nux vomica*, may be administered. All condiments, as spices and aromatics, should be avoided, and the patient should be guarded against habits of indolence and luxury which tend to exhaust the nervous energy.

The uterus should be placed at rest by removal of pressure upon the fundus by clothing, cessation of sexual intercourse, and avoidance of violent and intemperate exercise.

We can not, in this affection, as in cervical inflammation, resort to emollient applications and depletory measures. Our chief reliance must be upon the general means just mentioned, and upon the direct application to the diseased surface of alterative remedies.

Medicated sponge-tents are advised if they can be borne. These are passed completely up to the fundus uteri, and allowed to remain

for twenty-four hours, when, by a thread attached to them, the patient may remove them without difficulty.

Tents medicated with *iron, iodine, zinc, potassium, or copper*, may be employed once a week with great advantage. Not only does the medicinal substance come fully in contact with the uterine walls, but the pressure exerted by the expanding sponge likewise proves beneficial.

Récamier was the first who had the boldness to cauterize the cavity of the uterus, which he did by means of nitrate of silver in an ordinary porte-caustique. There are four methods enumerated by which cauterization may be effected on the inner walls of the uterus, viz: 1. By the use of solutions painted over the surface; 2. By ointments left to melt in utero; 3. By injections of fluids into the cavity of the body; 4. By solid caustics.

In commencing the treatment, the cervical canal should be first well opened, in order to admit the free escape of fluids from the cavity above, and the application of substances through it from below. The proper dilatation of the cervical canal is to be accomplished by the previous introduction of sea-tangle tents.

The Sims speculum, or some of its modifications, or the short telescopic cylindrical instrument, is recommended as the most suitable to be used in these cases.

The instrument having been introduced, and the cervix cleansed by the speculum syringe, the operator very gently passes to the fundus the uterine probe, and learns the exact course of the canal. Then, as directed by Thomas, placing the flat dressing-probe by the side of this, he gives it the exact curve he has ascertained to be that of the uterine canal, and wrapping it with a thin film of cotton passes it to the fundus. By this means a good deal of mucous is removed from the cavity, which would otherwise neutralize the caustic introduced. Another probe is then introduced with lint or cotton thinly wrapped around the end and saturated with the *fluid* caustic intended to be used. This is passed up directly to the fundus, and kept there for half a minute to a minute. This should not be repeated, for the astringent action of the caustic makes repetition difficult, and if properly done the first time, it will not be necessary.

After this, the patient should go to bed and remain perfectly quiet for three or four days, if a strong caustic have been used; for one or two days if a mild one has been employed. The caustics which may be thus employed are:

Solution of chromic acid, \mathfrak{zj} to \mathfrak{zj} water; solution of nitrate of silver, \mathfrak{gij} to \mathfrak{ss} to \mathfrak{zj} water; Churchhill's tinct. iodine, \mathfrak{ss} to \mathfrak{zj} glycerine; saturated solution of sulphate of copper; U. S. D. solution persulphate or perchloride of iron; solution of chloride of zinc, \mathfrak{zj} to \mathfrak{zj} water; U. S. D. muriate tincture of iron, \mathfrak{zij} to \mathfrak{zj} water.

We are advised that in using a saturated solution of strong caustics, such as chromic acid, the practitioner should be sure that there is no excitement about the uterus at the time the application is made; that not one superfluous drop is left upon the cotton, and that the patient remain perfectly quiet after the application. No one, unless familiar with the practice, should resort at first to strong caustics, but make use of one of the milder ones until he acquires the requisite skill.

The use of *ointments* is proceeded with in much the same manner, except that a different instrument is necessary for their introduction. That which answers the purpose best is the invention of Dr. F. D. Lente, mentioned by Dr. Thomas, of New York. It consists of a syringe with a silver tube attached. The ointment to be employed is put into the syringe by a spatula, and the tube being introduced into the uterine cavity, the piston is pushed forward, and the ointment is forced out. The following are the ointments which are generally thus used, though any others, as *lead*, *bismuth*, *calomel*, *iodine*, etc., might be substituted:

R Argentine nitratis, \mathfrak{zij} ; belladonnæ extr. \mathfrak{zj} ; unguent spermaceti, \mathfrak{zjj} . Mix.

R Plumbi acetat, \mathfrak{zij} ; morph. sulph, grs. $\frac{1}{4}$; butyr. cacao, \mathfrak{ss} ; oil olive, q. s. M.

In regard to the application of solid caustics to the uterine cavity, the only one that has ever been used is the nitrate of silver: for although the *potassa cum calce* has been recommended, no one has ever ventured to follow the recommendation that we have heard of. The use of lunar caustic gives such great pain, and brings on such grave constitutional symptoms, that it never can become a popular remedy used in this way. It is considered, however, of great value in obstinate cases, and should be held in reserve. Sometimes the severest *uterine colic* is produced by it, with nausea, vomiting, and great prostration. By Dr. Lente's probe the cauterization is accomplished in an easy manner, and better than by any other method. This instrument consists of a probe, shaped like the ordinary uterine probe; it is warmed and then dipped in a little

platinum cup, or a watch-glass, that contains nitrate of silver that has been fused over a spirit-lamp. Removing the probe after dipping it, and waving it for a few seconds, a film of nitrate of silver will be found to cover it. It may be again dipped, and the process repeated until a sufficiently large pallet covers the tip of the instrument. It is thus used: The cervical canal having been cleansed of mucus, and its direction learned by the ordinary probe, Lente's probe is passed up and rubbed against every part of its investing membrane, and dipped as carefully as possible into its convolutions before removal. After all such applications, a stream of water should be projected against the cervix, and a pledget of cotton, which has been freely saturated in glycerine, with a bit of thread attached, should be placed against it. By means of the thread this may be removed by the patient in twelve hours. As a general rule, these caustic applications should be repeated about once a week.

Another excellent method of treating these cases is by means of medicated tents of sponge. The sponge may be wound upon a large wire, which will leave a large canal. This may be filled, after the tent is dried, with a long suppository of cocoa butter, containing nitrate of *silver*, *iron*, or any other mineral desired. As the tent expands, it is permeated by the element contained in the suppository, which thus come in contact with the walls of the uterus. Or, sponge cut into proper shape is saturated for a length of time in solutions of zinc, copper, iron, iodine, carbolic acid, or lead. They are then squeezed, soaked in a solution of gum acaciæ, and made into tents. The influence of these means is extolled as highly beneficial.

Art. 3.—Dropsy.

A paper read before the Union District Medical Society, at Hamilton, Ohio, April 29, 1875, by DANIEL MILLIKEN, M.D., Hamilton, O.

At the risk of making an observation superfluous in this audience, I remark at the outset that dropsy is not a disease. Yet, though it is not a disease, it is a formidable and alarming symptom of the gravest chronic maladies that flesh is heir to, and deserves discussion on that account. Moreover, in the vulgar nosology, it is held to be a disease *per se*, along with jaundice, cough, fever, head-

ache, etc., etc., and when we are called to a "case of dropsy," the dropsy must be thought on, its possible causes must be canvassed, and the actual cause or causes detected for treatment. The following notes, then, are in a sense clinical. If they do not come from the bedside, they are meant for the bedside; and it is hoped they will assist the writer, at the least, in the cogitations which are necessary in the presence of this grave symptom.

It is proposed to briefly enumerate the pathological conditions under which dropsy may arise, to barely mention the diseases of which it is symptomatic, and to lay down brief and general rules for treatment.

Dropsy may be defined: *A morbid extravasation or transudation of water from the blood, with more or less of the constituents of blood-serum, into the cavities and areolar tissue of the body.* This morbid transudation might occur in two conceivable ways—that is, either by reason of a morbid permeability of the vessel-walls; or, on the other hand, by reason of a morbid change in the blood, whereby its natural power or tendency to permeate the vessel-walls is exalted. Of such a morbid change in the vessels nothing is positively known, though it has been asserted that paresis of the capillaries is an invariable precedent event in every dropsy, general or local. But it is very certainly known that morbid changes in the blood bring about the dropsical effusion, and with these we have now to do.

There are two highly distinct abnormal conditions of the blood, one physical, the other chemical, and both tending to dropsy. The blood is liable to an increase of tension in the veins and capillaries, or it is, in the second place, liable to a change of chemical composition.

Abnormal tension of the blood, in a degree sufficient to produce general dropsy, is found only in the veins. It is not, at the first glance, inconceivable that the blood might be forced onward in the arteries with such an accelerated rate of motion that, finding no sufficient passage down the caliber of the capillaries, its watery part would be forced through the very walls of the arterioles and nearest capillaries, and indeed it was formerly taught that there was such a lesion as "simple hypertrophy of the heart," and that the hypertrophied organ drove the blood onward at such a rate as to cause universal arterial congestion and general dropsy. But it is now very generally believed that cardiac hypertrophy is always compensatory, and never more than compensatory of some

influence which retards the blood-stream, and that the lesion, supposing it to exist pure and uncomplicated, can not produce cyanosis or dropsy. (See Niemeyer's lucid demonstration, and a very emphatic quotation from Bouilland, *Text-book of Practical Medicine*, Vol. I., p. 304.)

If, then, passive venous congestion is the common pathological condition of dropsy from physical causes, let us inquire under what circumstances this condition of the circulation may present itself. It occurs, in general terms, whenever there arises an impediment to the flow of blood to the right side of the heart. Stenosis, or insufficiency at the tricuspid valves, produces this condition very promptly; for, as soon as the right auricle becomes incompetent to force the blood onward, the veins must become engorged. Stenosis, or insufficiency at the pulmonary semilunar valves, presently engorges the right ventricle, and afterward the right auricle and the systemic veins. Obstruction to the blood-stream in the lungs also reacts, sooner or later, upon the blood in the systemic veins, by way of the right heart, causing a stasis, first in the pulmonary artery, then in the ventricle of the right side, then in the auricle, and then in the systemic veins. Any interference with the blood-stream in the left heart, whether obstructive or regurgitative, and whether at the mitral or aortic orifices, produces a stasis, when the left heart begins to fail, and this stasis is propagated backward against the current, reaching first the pulmonary vein, then the pulmonary capillaries, then the pulmonary artery, then in succession both chambers of the right heart, and finally the systemic veins. But it should be added that disease of the left side of the heart seldom goes through all of these stages. When the engorgement extends so far backward against the current of blood as to reach the lungs, the continued hyperæmia of these delicate organs wears the sufferer's life away before the two chambers of the right side of the heart will so far degenerate as to allow the engorgement of the systemic veins.

So much for the physical causes of dropsy, which are in truth problems in hydraulics.

We come now to speak of those chemical changes in the blood which may cause dropsy. All of these chemical changes result in hydræmia, which term, well defined by its etymology, signifies a watery state of the blood. Now, since the amount of water in the blood-vessels can be very rapidly diminished by drainage through the kidneys, a watery state of the blood would be promptly cor-

rected if it depended on an actual increase of water. The fact is that the increase of water in the blood in hydræmia is not actual, but relative to the amount of solids, and the condition is brought about by the loss of some portion of these solid elements.

What are these solid elements? Disregarding the salts of the blood, we will speak only of the albuminoids, and first of albumen. And how is it reduced in amount? Plainly, it is reduced in three ways: By diminished assimilation, by increased waste, and by direct drain. Diminished assimilation occurs when ingestion is scanty or digestion is imperfect. Increased waste of albumen occurs when great muscular work is performed, and most notably during fever, when albumen is burned out of the blood together with all other nitrogenous substances from the blood and tissues. Direct drain of albumen occurs in albuminuria and dysentery, and indeed in hemorrhages, as will be hereafter noted.

It may be remarked here that these three modes of diminution are usually combined. For when the proportion of albumen in the blood falls below a certain point, febrile reaction is set up, and tends to burn away the remainder; and when fever of any sort is present, we find usually anorexia and dyspepsia, which forestall the assimilation of new albumen from food; and finally, when albumen is rapidly and directly drained away, we find often anorexia, dyspepsia, and fever.

The corpuscular elements of the blood are greatly reduced under the morbid conditions which have just been mentioned. They are moreover destroyed by the syphilitic and malarial poisons, and by the bile-acids in jaundice, and by lead, and by mercury. Mucous, muco-purulent, and purulent discharges diminish the blood-corpuscles also by direct drain.

Fibrin is another solid which may be diminished by disease, and notably by the continued fevers. Its decrease aids, no doubt, to bring about the condition of hydræmia, but that a loss of fibrin alone can cause dropsy is not known, nor is it probable.

To come to an end of this subject, we remark that hemorrhage reduces the amount of the blood and of course of all the elements of the blood. Now, the one element which is quickly replaced is water, so cheap, so abundant, and so easily absorbed. The ultimate effect, then, of hemorrhage, or venesection, is to produce some degree of hydræmia, and we will need to recall this very important fact when we come to treatment.

But how does hydræmia induce transudation of the dropsical

fluid? In the first place, we know that the watery blood escapes through the walls of the capillaries with preternatural facility, in accordance with the law of osmosis; that weak solutions penetrate animal membranes more readily than strong solutions. In the second place, it has been experimentally determined that the diluted blood of hydræmia does not pass down the caliber of the capillaries as readily as blood which is rich in albumen and fibrin; and, because of this delay and partial stasis, the diluted blood attains a higher hydraulic tension in the capillaries. For a double reason, then, the serum of watery blood is more apt to transude than the serum of the rich blood of health.

These, then, are the conditions of dropsy. Either the blood must be increased in tension or altered in chemical composition, or, as is often the case, it is both physically and chemically altered.

We are now ready to enumerate the diseases of which dropsy is a symptom.

Though not of itself capable of directly producing general dropsy, cirrhosis of the liver causes enormous deposits of water in the abdominal cavity, and, in about one-half of the cases, considerable œdema of the lower extremities. Œdema of the face and upper extremities does not occur in hepatic cirrhosis without a renal or cardiac complication. Hydroperitoneum is so uniformly due to cirrhosis of the liver, that the disease may be assumed in every case of ascites without general dropsy.

It will hardly be necessary to explain the co-existence of this disease and this symptom. Let us sum it all up in a sentence: By the cirrhotic contraction the blood from the portal vein is prevented from passing freely into the liver, and it being dammed back, the pressure is felt throughout the portal vein and its branches (which have no valves), and hence the more watery part of the blood is driven through the vessel-walls and peritoneum into the abdomen.

Before reviewing the valvular diseases of the heart, it may be well to say, in general, that when a deformity exists at any one of the orifices of the heart, interfering with its perfect mechanical action, the organ, excited by the universal systemic cry for more blood, takes on a more vigorous action, and because of this increased action becomes hypertrophied. This hypertrophy is often sufficient to compensate the mechanical defect for a long lifetime, and no abnormal tension in the blood-vessels can occur until the hypertrophy fails. This is the explanation of the familiar clinical fact, that dropsy does not appear in cardiac disease until late in

the history of each case, provided always that the patient's power of nutrition is sufficient to maintain the hypertrophy at all.

The aortic valves being farthest from the venous system, deformity of these valves, or stenosis at the aortic orifice, does not lead to dropsy so soon as other cardiac lesions. As we have previously remarked, the obstruction to the passage of blood through the aortic orifice can not react upon the stream of blood in the systemic veins, until it has engorged in succession the pulmonary vein, the pulmonary capillaries, the pulmonary artery, and both chambers of the right side of the heart. It follows that catarrhal bronchitis and shortness of breath, indicating pulmonary congestion, are the earliest and most invariable symptoms of disease of the left side of the heart. On account of this pulmonary congestion, patients suffering with aortic disease are very liable to pulmonary œdema, and it is commonly the immediate cause of their death.

Little need be added to this to describe a case of dropsy from mitral disease. It might suffice to say that dropsy is more imminent in mitral lesions, since one whole chapter of the progressive mischief of aortic disease is omitted, viz., the dilatation, hypertrophy, and failure of the left ventricle.

Passing from the left heart backward along the blood-current, we note that obstruction to the flow of blood through the lungs may occasion general dropsy. In such a case, two chapters of a case of aortic disease are omitted, viz., the dilatation, hypertrophy, and failure, first of the left ventricle, and then of the left auricle. Dropsy, therefore, supervenes earlier when the cause is located in the lungs. It is not necessary to more than mention the diseases which destroy or compress the pulmonary capillaries. Tuberculosis destroys lung-tissue and capillaries, if life be somewhat prolonged. Chronic interstitial pneumonia contracts the whole lung-tissue, and so compresses the pulmonary vessels as to impede the passage of blood. In pulmonary emphysema, the intervesicular septa are absorbed, and the pulmonary capillaries displayed upon these septa are lost. Asthma sometimes produces anasarca, slight and transient, but unmistakable. Niemeyer asserts that cyanosis and general dropsy occur from exacerbation of chronic bronchial catarrh; and his ingenious explanation of this symptom is, that the caliber of the bronchial tubes being diminished, patients are compelled to expire with vigor, even using the abdominal muscles to assist in every expiration, and thus great pressure is brought to bear upon the thorax, so that the flow of blood thither is greatly

impeded, and hence the dropsy, which often becomes complete during the exacerbation, and abates when the bronchitis abates. Niemeyer has remarked also of emphysematous patients, that they are merely "ripe" for cyanosis and dropsy, but not actually cyanotic nor dropsical, until some trifling bronchitis increases the impediment to the pulmonary circulation. An important diagnostic point is, that these pulmonary diseases can not cause dropsy until the right side of the heart has been overloaded, overworked, and finally overpowered. Physical examination will reveal this state of affairs, and will enable us to accept or reject suspicions of pulmonary obstruction which we may entertain.

And this brings us naturally to speak of the deformities of the right heart. Uncomplicated lesions of this region are almost unknown. They do occur *in utero*, but very rarely. And therefore disease of this side may be construed as pointing to some interference with the blood-stream farther on—that is to say, in the lungs, or the left side of the heart. Physical examination of the lungs and the mitral and aortic openings is demanded in all such cases.

Aged persons sometimes become dropsical a short time before death, from atrophy of the heart. This atrophy is strictly senile, and is not to be confounded with the degeneration and atrophy which, sooner or later, takes place in the hypertrophied hearts of younger subjects. The malady is always preceded by cyanosis; it is often seated in all parts of the heart; it is progressive and hopeless.

We leave here the enumeration of the diseases which produce dropsy by mechanical or hydraulic means, to say that no great difficulty ought to be experienced in detecting the chemical cause, hydræmia. In every case of fluid collection, it is proper to ascertain whether the patient is not convalescing from some wasting disease, whether he has not a wasting discharge, or whether he is not subject to the pernicious influence of the malarial, syphilitic, saturnine, or mercurial poisons, or to the bile-acids, or to the prolonged administration of alkalies. If it can not be determined that one of these poisons is operating, there arises a great probability that albuminuria is the cause of the dropsy, especially when the dropsy is great, and is associated with great pallor. In any case leaving room for suspicion the urine should be tested for albumen, and the microscope should be used to determine whether the albuminuria, if there be any, is due to renal disease, and if so, to what disease.

When we consider the multitude of causative conditions of dropsy, the idea of laying down rules for treatment might be thought absurd, and all the more absurd because it is rare for one single, uncomplicated cause of dropsy to be found operating alone. In very truth, each one of the causes of dropsy which we have enumerated, tends to bring every other into operation. We have already noted that the different causes of hydræmia work together; we have now to suggest that certain causes of hydræmia are also indirect causes of cardiac disease. Suppose a case of albuminuria. Prolonged albuminuria implies damaged kidneys, and always when the kidneys are damaged, the heart, as if moved by a conservative instinct, hurries the blood faster and faster through the damaged organ, in order that the depurative process may be accomplished. Now this increased labor for the heart requires hypertrophy of the heart, and this hypertrophy, while it is the very condition of present existence, looks surely to ultimate degeneration, and, when the hypertrophied heart becomes at length degenerate, we have a hopeless complication of albuminuria with general congestion extending from the left heart through the pulmonary circulation into the systemic veins. It is doubtful whether life is ever prolonged to exhibit these two great chemical and physical causes of dropsy fully operative in one patient.

We can not here go into a discussion of the much vexed question whether a complication, the converse of that last described, can ever take place; that is, whether heart disease can induce the various forms of Bright's disease. It is agreed on all hands, that whether the kidneys are or are not structurally injured by the venous congestion of cardiac disease, they are at least functionally disturbed "during the last few weeks" of most cases of disease of the heart, and the albuminuria which then supervenes, greatly aggravates the dropsy which previously existed from a physical or hydraulic cause.

Ascites, by pressure on the vena cava ascendens, introduces us to another complication; for the pressure upon that great vessel causes slight and sometimes great œdema of the lower extremities. This of itself is a trifling affair; but ascites can do worse. It perturbs the whole economy and deranges all functions, and if long continued, it surely induces hydræmia by interference with nutrition and by direct pressure upon the kidneys.

Engorgement of the systemic veins brings about hydræmia in a very direct manner. A patient with this condition of circulation

may for a time have good appetite, good food, and good digestion, and yet be starving. It will be remembered that a large part of the alimentary principles are absorbed by the lacteal vessels and are conveyed by them to the receptaculum chyli, and that the thoracic duct conveys the chyle from this receptacle and pours it into the blood-current at a point near the junction of the left subclavian and left internal jugular veins. Now when these veins are engorged, the increased pressure is conveyed in all directions, in accordance with the well-known law of hydrostatics, and reacts against the stream of chyle in the thoracic duct, and on this account the absorbed aliment is slowly admitted into the blood. The end of such a case is near. The heart which has long been deformed and inefficient, and which has been doing extra labor because it was inefficient, is now required to pump thinner and thinner blood through more and more resisting capillaries, and, let it be remembered, the heart itself is starved for lack of rich blood.

If, then, the causes of dropsy mutually aggravate each other, and if one tends to excite the others, we have the very plain principle of treatment that we must not only treat an affection which exists, but must anticipate others which are imminent. When dropsy ensues because a heart is beginning to fail, we should not only direct drugs to the heart, but we should see to it that the poor, staggering, prematurely old organ shall deal with the best possible quality of blood. And, on the other hand, when a dropsy is known to be caused by hydræmia, though it is our manifest duty to force nutrition and put an end to direct waste, and thus enrich the blood, it is also an imperative duty to stimulate and support the heart. In all cases of dropsy from failure of the right heart, the lungs should be examined, where some obstruction to the circulation may be detected and happily removed. In dropsy from renal disease, it will not suffice to attend to the character and amount of urine, nor to drain away dropsical effusions. The case is not well treated until every possible effort has been made to restore the proper proportion of albumen to the blood and to avert the manifold dangers to the heart. So, also, in ascites from cirrhosis of the liver, treatment is not to be directed alone to the liver and portal circulation, but the whole system must be watched and treated.

In all cases of general dropsy, all hope of repairing the damage done should be abandoned from the start if that damage be anatomical or structural. We must be honest enough to confess to ourselves and our patients that a damaged heart, lung, liver, or

kidney is damaged forever. Recovery from dropsy caused by lesion of these organs is not impossible, to be sure, but restoration of the deformed or degenerated parts is of course impossible. The patient who has once been dropsical, should understand that, unless his dropsy has been caused by transient hydræmia, he is henceforth a cripple, and that unceasing attention to hygiene is the price of his health and life. The only cases in which the cause of a dropsy can be removed with the dropsy are those rarer cases in which hydræmia, pure and simple, causes the transudation.

Another general rule of treatment is to give all dropsical patients an abundant nitrogenous diet with ferruginous medicines. It need hardly be mentioned after all that has gone before, that the object of this treatment is to prevent or remove the chemical cause of dropsy—watery blood. It has been often noticed that patients cyanotic from cardiac disease, become immediately dropsical when any form of hydræmia supervenes. A girl who had been suffering for a year from parenchymatous nephritis, presented herself at the Tübingen clinic, where, on account of a supposed plethora, she was bled. "A week after the blood-letting, the first symptoms of anasarca showed themselves, and since have never disappeared. In another case, the patient became anasarca after a hemorrhage, but the anasarca disappeared for a while, and set in anew after the establishment of profuse suppuration." Neimeyer, II. 29. Probably every one in this audience has observed that patients in good circumstances or in hospital, may live a long time, with proper diet, though suffering all the time from albuminuria; but when such patients, by reason of poverty, ignorance, or dyspepsia, do not assimilate an abundance of nutriment, the career of their albuminuria is short.

While studying the connection of dropsy and cardiac maladies, it is difficult to suppress a regret that the serum is forced through the capillaries by venous congestion. If the pressure were brought to bear from the arteries, we could easily diminish the vigor of the action of the heart by a selection from the great armory of sedatives. But, as it is, and since the heart is behindhand with its work in every case, we are compelled to stimulate, and unfortunately the available heart-stimulants are few in number and hard to manage. The ethers and some other stimulants may answer in brief emergencies, but when it is desired to whip up the heart for a long time, we are reduced practically to one medicine—digitalis, "the heart tonic."

We bring out another general principle of treatment by the statement that dropsical patients do not always die of their anasarca, though the persistence of this symptom indicates the existence of mortal disease. We are therefore not warranted in interfering directly with a dropsical collection, unless some important function—for example, respiration or digestion—is seriously interrupted. We must rather, like Polonius, go round to work, and strive to remove the dropsical collection by treatment addressed to its cause.

If an exception may be made to the rule, *do not attack dropsical collections early*, we would make it in favor of diuretic treatment which sometimes relieves the poor anasarcaous patient of his load and does no harm. The mild alkaline diuretics are especially indicated in dropsy from renal disease, and particularly in that form of renal disease in which we find the urine loaded with casts of the uriniferous tubules. There is good ground for hope that a vast quantity of these casts may be washed away in a freshet of alkaline urine, and the efficiency of the kidney be increased. And when we know, as we do certainly know, that much urea is washed out of the blood whenever copious diuresis is produced, we are ready to administer mild alkaline diuretics in this form of Bright's disease with good hopes of removing a troublesome collection of fluid—of removing impediments to the free secretion of urine, while we dilute and remove a terrible poison from the blood. When administered at all, the alkaline diuretics should be given in large quantities and for a short time. Large doses are indicated because we desire a veritable flood. We should soon abstain from the treatment, because the alkalies and their salts tend to produce hydræmia if long continued.

Diarrhea has long been observed to drain away dropsical effusion; and from this, no doubt, has arisen the opinion that artificial diarrhea may have a therapeutic value for our purposes. In ascites, the measure is indicated as the readiest means of unloading the portal circulation. In all other cases of dropsy, drastic purgatives must be used with extremest caution. Their invariable tendency is to produce exhaustion; and patients with general dropsy are rightly regarded as persons already staggering under mortal disease who may not be safely exhausted by treatment. But when, in renal disease, unequivocal signs of uræmic poisoning are manifest, an artificial diarrhea may be boldly induced, not, however, to relieve the dropsy, but with hopes of eliminating urea through the

intestines. It may be added, also, that while the energetic use of hydragogues in general dropsy threatens to diminish strength and impoverish blood, yet nevertheless it is permitted to administer a cathartic at long intervals, when a diuretic treatment has been determined upon; for George Harley and others have observed that diuresis is more easily produced after brisk catharsis.

Nature often relieves œdema of the lower extremities, by excoriations and fissures, from which flow enormous quantities of serum. It has been proposed to anticipate her in this practice, by making punctures and incisions in the legs. The general effect of this drainage is good, but the nutrition of the tissues is so imperfect that the trickling serum causes more or less local mischief, which is sometimes a trifling moist cutaneous eruption, but sometimes the most frightful and intractable sloughing. On account of this danger, most authorities forbid to puncture. Fothergill, discussing the dropsy of cardiac disease, declares that the practice only adds a wet bed to the other miseries of the patient.

Puncture for œdema naturally leads us to speak of paracentesis for the removal of fluid from the cavities. We have said that violent purgation is not justifiable until an emergency is at hand, and the rule has long been to practice tapping only after the most heroic attempts have failed to drain away the fluid through the intestines. But paracentesis is not considered a last resort by the later authorities. The older writers asserted that if a patient were tapped once, he would need to be tapped frequently thereafter until death. This is unfortunately true, in general. But when we confess, as we must confess, that few cases which require tapping can ever permanently recover, we are ready to declare that the operation is a palliative, temporizing measure, not expected to cure. It is urged, and reasonably, that no lesion of the blood, lungs, heart, liver, or kidney, sufficient to cause general dropsy, can be recovered from, even temporarily, unless the nutritive functions are carried on fairly, and, since it is impossible they should be fairly carried on under the enormous pressure of a developed case of hydroperitoneum, it seems to be imperatively demanded that the pressure shall be diminished by the removal of the fluid collection. To this end, diuretics should be fairly tried. If they fail, hydragogues should be administered, but on no account to greatly reduce the patient's strength. If all fail, paracentesis should be done without regard to the fact that it may need to be repeated. It is

indeed a measure for an emergency, but the emergency comes earlier and is more serious than the older authorities taught.

We conclude with the grave question: What is the probable mode of death of dropsical patients, and how shall we treat the crisis? Leaving out of view a great number who die by asthenia, worn out rather than killed, we observe that nearly all of the remainder perish by the extension of the dropsy to vital organs. They are "drowned in their own fluids." In other words, they die of œdema of the brain or lungs. Treatment in these cases depends very much upon the cause of the dropsy. If hydræmia exists, little more can be done than to give vigor to the heart's action, and favor the brain by position when the brain is involved. It is recommended, also, to ligate the lower extremities and make them reservoirs of blood and serum for the time. If the dropsy is caused only by cardiac disease, and the blood remains of fair quality, we may boldly set to work to diminish the volume of the blood by active purgation, or even by venesection. We may in any case attempt this by diaphoresis and diuresis. If there exist a large collection in the abdomen, so large as to interfere with the play of the diaphragm, and consequently to interfere with the free return of blood from the brain, tapping will relieve the heart and lungs from pressure. The same procedure is of course proper in threatened œdema of the lungs. May we bleed patients who are absolutely dying from pulmonary œdema? We may, even when their blood is impoverished and watery. The operation in such a case is the forlornest sort of a forlorn hope. It should be done when there is not the shadow of a chance of recovery without the venesection, and with the understanding that there is not the ghost of a chance of recovery from a second attack after the venesection.

Art. 4.—A Case of Hysteria.

By JAMES L. NEAVE, M.D., Cincinnati, Ohio.

Professor Flint says of this disease that "it embraces a multiplicity of morbid phenomena;" and as illustrating one of the protean forms of this peculiar class of the neuroses, the clinical history of a case that occurred under my observation may not come amiss.

The case in point was that of a young married woman, æt. 19. The only history of the case obtainable was, that for three weeks she had complained of some abdominal pain in the left lumbar region. During this time and previously, there was nothing whatever unusually noticeable about her actions. Two days previous to coming under my observation, she was found one morning lying in bed unconscious. It was reported by those who saw her, that at first she lay perfectly motionless; that the surface of the body was cold; the pulse almost imperceptible, and the eyes wide open and staring. In a few moments she had a convulsive seizure, throwing her arms and body about, and with peculiar hallucinations, to be elsewhere described. This was the only seizure they witnessed. From this date her entire nature seemed changed; her appetite, previously good, now became ravenous, and in place of being usually even-tempered, she now became peevish and irritable. This was the story related by her friends; but I think due allowance must be made for their evident solicitude lest I should not fully appreciate the gravity of the case, and their desire to magnify every symptom.

The case first came under observation July 17th. The patient was tall, rather loosely built, and quite anæmic; was the mother of one child, a year old, which she was still nursing; was rather irritable and restless, and somewhat adverse to answering questions. At one moment quiet and perfectly rational; at the next, she would be in one of her peculiar seizures. She would be quietly conversing, when suddenly without warning she would lie perfectly still and motionless, scarcely breathing, and with her eyes fixed and vacant. The next moment she would make violent efforts to push some imaginary persons from her, saying they were trying to throw a veil over her face. In a moment she would begin to squint, and this would increase as the veil was brought closer, until finally, when her tormentors had succeeded in bringing it down over her face, she presented one of the most marked cases of convergent strabismus I ever saw. At the same time *there was marked contraction of the pupils*. There were no febrile symptoms of any kind; no acceleration of pulse nor elevation of temperature. Her hands and feet, rather than having any abnormal heat, were decidedly cold. Ordered her to have: R Potass. bromid. grs. xxx; chloral hydrat. grs. x; repeated every four hours.

July 18th. Rested well through the night and was perfectly quiet. This morning I noticed that she was quiet enough until she

saw some one of the male sex near her, when she would immediately go off into one of her peculiar "spells." Complains some of cephalalgia, which is worse when she amuses herself by squinting. Noticed that she would converse quietly enough with me for a few minutes, and then seeming to think of the inconsistency of her course in not allowing the presence of her physician to throw her into fits, when the appearance of any other man would do so, she would suddenly begin to complain of the veil being drawn over her eyes, until a sharp order to behave herself, emphasized by a severe grasp on the arm, brought her to her senses with a suddenness that was rather ludicrous. No medicine whatever was given during the day, and only one dose of the chloral and bromide mixture, at bedtime, more for the moral effect than for any other purpose.

July 19th. Passed another night quietly. The novelty of creating a sensation appears to be wearing off, and she is much more like a rational being to-day, not having the attacks near so frequently and then only slightly; just enough to keep up appearances. To-day, however, developed a new feature in the case. The patient complaining of some abdominal pain, gave occasion for passing the hand over that region, when it was found that pressure over the umbilical region was immediately followed by the hysterical spasm. The patient seemed suddenly lost in vacancy; then the imaginary persons appeared, bringing the inevitable veil, which they proceeded to throw over her face; the contraction of pupils and convergent strabismus followed the taking of the veil; the desperate efforts to repulse her persecutors, followed now by a long-drawn sigh of relief when the performance was all gone through with, and she could consistently rest. With this new phase, the peculiar sinister influence of the male sex seemed to have been forgotten, and it made little difference how many came near her. Pressure over the umbilicus, however, invariably produced the desired effect, until she received another sharp reprimand and was ordered to be quiet, when she was again startled into propriety. She has been nursing her babe to this date, but to-day it was taken from her.

July 20th. Again rested quietly through the night. The bowels were freely moved by a cathartic administered yesterday. Pressure over the umbilicus still has a tendency to produce the hallucinations,(?) but only intermittently and to a slight degree,

the patient acting as though she feared another reprimand. To-day was given the following ferruginous tonic:

R Ferri et quiniæ citras, grs. iv.

Vin. Xeric. ʒi.

M. Sig. Given after meals.

July 22d. Has been almost entirely free from the paroxysms for the past two days. Last night, for the first time since she has been under treatment, she got up an excitement by way of variety. She was found out of bed, and apparently just about to climb out of the window. When she was again placed in bed, she had one of her customary seizures, going through the whole performance of taking the veil, as usual. After this she remained perfectly quiet through the remainder of the night.

July 23d. Somewhat restless again during the night, but no outbreak. When I first saw her to-day she commenced her amusement of crossing her eyes, etc., until I rather impatiently told her we were heartily tired of it, and positively would have no more such performances; at the same time telling her that just so sure as she persisted in trying it again, I would resort to the use of the hot iron. This was the last of the trouble, and I never noticed the least tendency to a relapse. She certainly looked a little startled when the hot iron was mentioned, and the least reference to this plan of treatment was sufficient to promptly suppress any incipient appearance of a relapse. She was kept under observation for a week longer, when, as she continued perfectly well, it was not considered necessary to see her any more.

This case certainly was to me a new phase of this peculiar disease; and that it was a case of hysteria, I think there can be no doubt. When first seen, the peculiar train of symptoms suggested to my mind that there was some local affection either of the brain or its meninges. Closer observation soon demonstrated, however, that inflammatory trouble was not to be thought of, as there were no febrile symptoms. The skin was always cool and moist; the pulse soft and regular, sometimes rather feeble; there was no injection of the eyes; nothing whatever indicative of inflammatory action. Brain tumor was not tenable, there being nothing upon which to base such an opinion either in the patient's history, general appearance, nor symptomatology. But one conclusion could be arrived at, and that was that I had a case of that most satisfactory of all diseases to treat, hysteria.

The general conduct of the case, I think, fully justified the diagnosis. The attacks invariably came on when she was certain that she was under observation, and they were always most intense when she knew there was some one of the male sex about, and preferably a professional man. Closely observed, an occasional shrewd look of intelligence could be detected, demonstrating that the patient was fully alive to the impression she was making upon those about her, and was determined to note the effect upon certain ones. Lastly, the ludicrous suddenness with which she came out of one of the "spells," when I unexpectedly, without the slightest warning, sharply ordered her to cease acting in such a manner, demonstrated fully the character of the case with which I had to deal. The completeness of the recovery, after she knew herself to be unmasked, and the plentiful lack of medication, all tends in the same direction. As to the cause, it would be difficult to assign any. She evidently had some uterine, or more probably ovarian irritation, upon which some writers base the cause. She was decidedly anæmic; other than this nothing.

Art. 5.—Case of Supposed Rupture.

By C. H. NEWCOMB, M.D., Mechanicsburg, Ohio.

Jas. H. called at my office December 15, 1874, to consult me on account of supposed rupture.

Is aged 23; color white; native of New York; resides in Springfield, Ill., where I was practicing at time of consultation; was a clerk in a dry-goods store; then unmarried; was wearing a truss, as the physician whom he had consulted diagnosed rupture, and ordered a truss to be worn. Patient had naturally a good constitution, but was anæmic; skin sallow; countenance anxious; hacking cough; appetite variable, at times ravenous; constant pain in right inguinal region—pain aggravated by being on his feet long at a time, and by irregular meals.

There were no symptoms of rupture whatever, other than as above. I was led to suspect tapeworm, and patient acknowledged that he had been treated for, and had passed a tapeworm about eight years ago, but had seen no signs of one until a few weeks previous to our consultation. I ordered R ethereal ext. male-fern,

ʒij.; elixir taraxacum, q. s. f., ʒij. M. S. One-half to be taken at bedtime and the remainder next morning before breakfast.

The result was unsatisfactory. I next ordered R ethereal ext. male-fern, ʒiv.; elixir taraxacum, q. s. f., ʒij. M. S. One-half at bedtime and remainder next morning before breakfast. The result of this was also unsatisfactory. Suspecting the male-fern to be of inferior quality, I requested the druggist to order from another house and refill last prescription. He did so, and patient took same as directed, and within fifteen hours from time of taking first dose, the entire worm was passed.

Note.—The peculiarities of this case were symptoms simulating rupture sufficiently to mislead a physician; the inertness of the first preparation of male-fern; the amount of male-fern used without any unpleasant results. By giving same in taraxacum, the fern is rendered not unpleasant to the taste.

Art. 6.—Case of Ovarian Tumor—Pregnancy—Abortion at Fourth Month—Fatal Termination—Autopsy.

By JESSE WASSON, M.D., La Porte City, Iowa.

Mrs. M. L. W., born August 20, 1840; died February 14, 1875. Patient menstruated first in her fifteenth year; generally quite regularly, but painfully. Dates her earliest symptoms of a disturbance in her left side—ovarian region—in her nineteenth year, and thinks it originated from a fall, she having leaped a distance, her feet when alighting on the ground, sliding, so that her nates struck the earth with great force. To use her own language: "It seemed to me that something broke loose inside of me."

Her menstrual period has always been attended with great pain. No other disturbance of the general system. She has always, with but very slight exceptions, enjoyed good health. She first recognized the existence of a tumor in the affected side something over a year subsequent to the fall she mentioned. From that time, at intervals, she experienced much pain in the side, between the menstrual periods. When she discovered the tumor it appeared to be about the size of a goose egg, movable, not very tender to the touch, and she thinks that from about that time until she called me, it had

a gradual growth, although at times she fancied it would not enlarge for some months, but that its growth was plainly evident from year to year. I was called to see Mrs. W. on January 31, 1875. Found her suffering with acute peritonitis, from which attack she never rallied. I learned that she had ceased to menstruate about the first of November preceding. Per-vaginal examination elicited that she was about in the fourth month of pregnancy, and that the uterus was fully retroverted, the "os" being directly under the pubic arch. Attempts were made to reduce the dislocated organ, but were unsuccessful, probably from the fact that there was too much pressure from the superincumbent tumor, and the extreme tenderness of the adjacent parts. There was no particular change or subsidence of the inflammatory process until the 13th day from the attack, when the uterus aborted its contents—a fetus of the fourth month. The patient then continually sank, dissolution taking place the morning of February 14th, the 14th day from attack.

The patient expressed a wish some days previous to death that an autopsy be held on her body, expressing a hope that some good to humanity might result thereby. This desire was acquiesced in by her relatives present.

The day after her death, I requested the attendance of Drs. Evarts and Woodley, at the post-mortem autopsy. The usual incision was made in the linea alba down to the sack, which, upon opening, was found to contain nearly or quite three gallons of a chocolate-colored fluid. Upon clearing the sack of its fluid contents, there were discovered five small *cul-de-sacs* leading away from the main sack, each about the size of a hen's egg. We found the entire periphery of the sack presenting the characteristics of a recent inflammatory process, being gangrenous in patches, and adherent very extensively to the abdominal parieties, and a greater portion of the intestinal tract occupying the abdomen. The transverse colon was entirely gangrenous. The adhesions were so general and firm that we were forced to desist in the breaking down process for fear of rupturing the intestines, only detaching the adhesions sufficiently to allow of grasping of the tumor below. The right ovary was found nearly in situ, slightly atrophied, and showing traces of recent inflammation.

We discovered the tumor occupying the left ovarian region, and dipping low down in the pelvis. Upon bringing the tumor to view, it was found incorporating the left ovary, broad and round liga-

ments, and Fallopian tubes, which, together with some adventitious growth, formed a broad, short pedicle about two and a half inches in length, three in breadth, and one in thickness. Ligating the pedicle midway between the tumor and uterus, we severed it and removed the tumor, which proved to be a fibro-cartilaginous lobulated growth, weighing three pounds and a quarter. Incisions in the tumor showed a capsular investment having a thickness of fully one-fourth of an inch.

During the operation we saw a splendid specimen of caput medusa, reopening of the umbilical vein, caused undoubtedly by the portal blood being forced back by the pressure of sack and contents.

In this case inflammation supervened without any apparent exciting cause, and terminated in dissolution without yielding to the treatment usually adopted by the profession in such cases.

This was her first pregnancy.

Ergotin in Croupous Pneumonia.—The well-known contractile influence of ergot upon the vessels—shown by the anæmia of the invisible mucous membranes—led Dr. Wycisk (*Allg. Med. Cent. Zeitung*) to employ it in six cases of croupous pneumonia, and the results were very favorable. In one such case with profuse serous and albuminous expectoration, the latter ceased entirely within two hours after the administration of the ergot of rye in powder, and the coarse rattling râles in both lungs gave way to the fine crepitation heard in the early stages of the disease. This effect lasted for two days, and at a second and even a third return of the expectoration, the ergot was administered with the same good results. None of the other five cases of pneumonia in which the ergot was employed terminated fatally, no residua were left in any; the effect of the ergot in all was to diminish the amount of the exudation and consequently the expectoration. The doctor, however, would not advise the use of the ergot in large infiltrations, in emphysema, in cases of rupture of cerebral vessels, or in exhausted or decrepid individuals, as it might in such cases prove hazardous. *All. Wein. Med. Ziet.*

Translations.

A NEW METHOD OF TREATING SPASTIC UTERINE CONTRACTION DURING THE SECOND AND THIRD STAGES OF LABOR.

By Dr. E. FRANKEL, of Breslau. Translated from *Archiv für Gynækol.*, b. 7, 2 hft., by W. H. TAYLOR, M.D., Professor of Obstetrics, Miami Medical College, Cincinnati.

Spastic contraction of the uterus, whether of the internal os, the lower segment, or of the entire organ (*tetanus uteri*), presents a serious obstacle to the performance of operations which are sometimes necessary for the completion of the parturient act.

Tetanus uteri, before the birth of the child, is especially frequent in cases of contracted pelvis, where the membranes have ruptured early, and where long-continued expulsive efforts have failed to deliver the child. Frequently, in these cases, the anterior part of the head or the face presents, remaining movable above the brim. Version is indicated, provided the contraction of the pelvis is not too great; but the attempt at version fails because the tetanic contraction of the uterus around the child, precludes the introduction of the hand of the operator or the turning of the child, without the most imminent danger of rupture of the uterus. Similar difficulties are encountered in neglected cases of transverse positions in contracted pelvis, or in normal pelves, where the abnormal position is not recognized early, or where the liquor amnii has been discharged long before the arrival of the obstetrician. In these cases, either the whole uterus firmly compresses the body of the child, or the lower segment of the uterus has rigidly contracted around a prolapsed part—*e. g.*, a leg or an arm. Formerly, under such circumstances, the advice was given to dismember the prolapsed part, it being the supposed impediment to delivery; at the present time, not unfrequently prominent obstetricians advise, in cases of head presentation, with moderate contraction of the pelvis and *tetanus uteri*, that perforation and extraction with the cranioclast be resorted to, on account of the asserted impossibility of turning, and that, in transverse presentations, evisceration or decapitation be performed.

I will not deny the necessity of the latter operation in certain cases, but I must assert that, in about one thousand abnormal labors, which, as assistant to the Breslau polyclinic, I have attended, in some of which there was considerable contraction of the pelvis, and under the most unfavorable circumstances, I have never resorted to this horrible operation. By the application of the method which I shall describe, I have succeeded in performing version where experienced and skillful colleagues have regarded it as impossible and embryulcia as unavoidable.

No less serious is spastic contraction of the uterus in the period of delivery of the after-birth. Usually, in these cases, we have to deal with partial contraction—stricture in its limited sense—which sometimes occurs at the internal os, sometimes involves the whole isthmus uteri. It originates, usually, in improper attempts to remove the placenta, either by too early and great traction on the cord, or by rough efforts at expression.

A third series of cases, by far less frequent, occurs, without any fault of the accoucher, developing spontaneously; viz., where the placenta is partially adherent. In such cases, a portion of the placenta is expelled from the uterus, another portion adhering, the intermediate portion, acting as a foreign body, induces violent contraction of the isthmus uteri, and develops the condition known as incarceration of the placenta.

In all these cases hemorrhage occurs, and often to a very alarming extent. I can not agree with Hüter (*Compend. der Geburtsh. Operationen*, s. 308), that there is a difference in the severity of the hemorrhage, according as it is associated with atony or spastic stricture in the after-birth period. I have found no such difference in practice, and theoretically do not regard it as probable, because I frequently find spastic stricture of the isthmus associated with atony of the body and fundus. It is true, that in such cases the external hemorrhage may be limited, as a coagulum may easily impede the flow of blood; but proportionally greater will be the internal metrorrhagia—a condition which manifests itself by the unusually high position of the uterus.

Spasm of the isthmus uteri occurs almost exclusively with mature births. Neither Hüter nor I have seen a case in a premature delivery. In premature births, especially between the twenty-sixth and thirty-second week, and where there is a macerated foetus, there is often excess of liquor amnii. Now if this condition be associated with a malposition—*e. g.*, transverse—the membranes rup-

ture long before the lower portion of the uterus is sufficiently dilated for the delivery of the child; the heretofore greatly distended uterus suddenly contracts, the small fœtus is firmly compressed, and the introduction of the hand of the operator is rendered impossible. Finally, I mention the spastic constriction by the neck of the uterus of the after-coming head in breech cases, by which the extraction of the head is prolonged, and the danger to the child greatly increased.

What now are the means recommended by the text-books and adopted in practice, by which to combat these various conditions? They may be placed in two categories, according as an urgent demand for delivery—*e. g.*, violent hemorrhage—exist or *not*. In the latter case the elder school resorted to the whole list of anti-spasmodics—*i. e.*, castoreum, asafoetida, warmth in the form of baths, injections, and fomentations. (According to my experience the two latter act as irritants, and increase rather than allay spasm.) The nauseants (ipecac and tartar emetic) have been abandoned; also, with our views of puerperal fever, venesection to syncope. Anæmic persons exhibit a very diminished power of resistance to surgical fever, and in the acute anæmia of lying-in women the closure of the uterine sinuses is the least perfect. There remains, therefore, for these cases only the use of opium internally, by clyster, or morphia by subcutaneous injection; and chloroform. Opium, and morphia are often valuable, but not always. Opium requires too long time (one to two hours) for its full effects, for us to rely on it in urgent cases, and we have seldom seen the effects of large subcutaneous doses of morphia in less than half an hour, and often longer, as Lebert, who introduced it into midwifery practice, admits.

Nothing but chloroform remains, and even *deep* chloroform narcosis does not relieve the spastic rigidity of uterine contraction, and according to Spiegelberg and others, the irritability of the uterus is very slightly diminished. During the anæsthesia the pains are weaker, the intervals are longer, and the chief effect is that the expulsive action of the *abdominal muscles* ceases entirely. The preceding are the methods resorted to where there is no urgent demand for delivery; but where the delivery must be speedily effected—*e. g.*, where there is incarceration of the placenta in the lower segment of the uterus, with dangerous bleeding—no time is allowed for the action of anti-spasmodics, the various forms of heat or opium, to be established.

Chloroform is recommended by many—*e. g.*, Schroeder in his text-book; but we have shown above, and have learned from experience, that it is of little value in such cases. Others—Hüter, for instance—fear the effects of chloroform, for the reason, as they assert, that the use of chloroform in anæmic women is always attended with danger, and further, that post-partum hemorrhage more readily supervenes after chloroform.

These fears are purely theoretical. Ask the military surgeon if, in cases of wounds of large vessels and profuse hemorrhage, he hesitates for a moment to administer chloroform to secure quiet for the performance of the needed operation? It is yet to be proven that chloroform narcosis is more dangerous to anæmic women than anæmic men. In hundreds of cases, in which chloroform was used, I have never seen hemorrhage during or after separation of the placenta, where, in other respects, the conditions of delivery were normal, and it is inexplicable how chloroform which, during the expulsive stage, does not arrest uterine contraction, should in the after-birth period produce atony of the uterus. Heretofore there has been no other resource, in urgent cases, than the gradual dilatation of the stricture with the fingers. This enfeebled the hand, and unfitted it for further operative procedure; and second—and chief objection—it is a prolonged and intense irritation of the most sensitive part of the puerperal uterus; and when, as in this case, the organ is in a condition of intense rigidity, is not without malign influence on the convalescence after delivery. Equally injurious are its effects upon the parametric connective tissue with its enormous development of blood-vessels. Para- and perimetritis are the frequent consequence of this gradual manual dilatation of the constricted isthmus uteri. Consequently, this method is also objectionable.

It was, therefore, desirable to find a therapeutic combination which, while it secured the greatest relaxation of the uterus, excluded the danger of subsequent hemorrhage, and that was so speedy and reliable that, in urgent cases, it could be used without such loss of time as to jeopardize either mother or child.

Until recently, I believed I had found this combination in the subcutaneous injection of morphia—15 m.g. to 3 c.g.—followed by chloroform anæsthesia (for an extended notice of which I refer to an article of mine in *Pragervierteljahrsh.* Bd. 116). I was led to resort to this method by an article by A. Martin, upon "Chloroform anæsthesia prolonged several hours by the subcutaneous injection."

tion of narcotics," Bay. ärztl. Intell. Bl. 44, 1863; and especially by Cl. Bernard's article in Bull. Gener. de Therap., 1869, p. 241, "Upon the physiological effects of morphia and their association with those of chloroform." Bernard shows that in dogs, who, it is well known, are with difficulty brought under the influence of chloroform, if 5 to 15 c.g. of muriate of morphia be injected subcutaneously, that, during the early stage of the effect of the morphia, small quantities of chloroform, which, under other circumstances would not produce narcosis, are sufficient to secure its full anæsthetic effect. The animal can be maintained in this condition for half a day; but if the inhalation be interrupted, sensibility returns.

I believed that from this proceeding a twofold advantage was derived for the woman in labor: 1. By the subcutaneous injection, the most speedy influence of the morphia against the uterine contractions was obtained, whilst the chloroform, in addition to a limited influence over the action of the uterus, arrested the action of the abdominal muscles, thereby facilitating any subsequent operation. 2. As in the administration of chloroform five to ten minutes after injection of morphia, a smaller quantity was required to induce complete anæsthesia, I hoped to lessen the danger which always attends profound chloroform narcosis. These physiological inferences were in a great degree substantiated by clinical experience. I frequently had opportunity to observe where I could scarcely force the end of the finger through the isthmus uteri, that, after morphia injection and subsequent very slight chloroform narcosis, the sharp-edged rigid ring relaxed, and the whole hand could pass the constriction without difficulty. I have thus succeeded twice in performing version, long after the liquor amnii was discharged, where other operators had made futile attempts, and I have always succeeded in speedily overcoming the constriction of the neck in cases of incarcerated placenta, with profuse hemorrhage, and have removed the placenta, adherent or not, and in no case did serious bleeding occur from subsequent relaxation of the uterus. On the contrary, chloroform narcosis, following injection of large doses of morphia, requires to be carefully watched, because of the great liability to asphyxia.

As I generally operated alone, this latter circumstance led me to seek for some agent whose combination with chloroform would be less dangerous, and more manageable by the physician without an assistant. Further, I had a case where there was a moderate

degree of contraction of a simple flat pelvis ; it was a first pregnancy—a face presentation. The os being fully dilated with chloroform anæsthesia, I performed version. In the attempted extraction, the lower segment of the uterus contracted so firmly around the head that the os appeared at the vulva when slight traction was made. The inspiratory efforts of the child demanded speedy delivery. I injected 3 c.g. of muriate of morphia, and then gave a new dose of chloroform. Despite these means, more than five minutes elapsed before sufficient relaxation took place to allow the extraction of the child without danger of laceration of the lower portion of the uterus. The fetus, in the meantime, was asphyxiated, and died soon after birth. This case was a new incentive for me to seek for a more speedy means of relaxing the uterus than the combination of chloroform and morphia.

I directed my attention to the preparations of belladonna, to which the older obstetricians ascribed great power in overcoming spasm, when locally applied ; further, the good results obtained by Breslau in overcoming spastic uterine contraction by injection of atropine, are well known (Wein. Med. Pr., 1866, 3). This method fell into discredit because Spiegelberg reported a case which he had observed, where, after injection of $\frac{1}{40}$ gr. of atropia sulph., a very dangerous degree of atony of the uterus supervened (Carstatt's Jahrsb. pro 1866). This, however, did not prove that atropine was not adapted to the purpose—merely, that in the particular case too large a dose had been injected, so that, not relaxation, but paralysis of the uterine muscular fibre occurred ; for, through the researches of Bezold and Blöebaum, the action of this alkaloid upon organic muscular fibre has been determined—viz., that the irritability of the intestine, the uterus, bladder, and ureters is impaired by very small doses, and entirely destroyed by large, the result being the same whether the poison act through the blood or from local application. (Untersuch, aus dem Physiol. Laboratorium in Würzburg, 1867, h. 1, s. 1.)

I believe, also, that the dose given by Spiegelberg was too large, the maximum quantity which I have given subcutaneously being 1 m.g., and in the many cases in which I have used it, I have never seen a dangerous atony nor hemorrhage supervene, where in other respects the usual care was exercised in the placental and post-placental periods. I also sought to obtain the effect of large doses of atropine, by a combination of small doses of atropine and muriate of morphia. Such an attempt may appear to have been

problematic, because of the generally assumed antagonism between atropine and morphine.

This antagonism prevails only to limited extent—*e. g.* in the effect of the two agents on the pupil and on the vascular system; and by a number of physiologists, all antagonism is denied. (B. Onsum of Christiana, Cbl. 1864, s. 627; Denis Gaz. hébdom. 1869, 7.) Harley's conclusions, from experiments with the two alkaloids separately and combined, upon dogs, horses, and men, are that no antagonism exists, and that the effects are more intense and prolonged when the two are used together, and that their effects are cumulative.

My own experience confirms the opinion that on the uterus their effects are cumulative. Very firm strictures relaxed in, at latest, not more than five minutes, and often immediately after subcutaneous injection. To remove the pressure of the abdominal muscles, I almost always allowed a few inspirations of chloroform, three to five minutes after the injection, and have been astonished at the ease with which narcosis supervened; what small quantities of chloroform were required; how quiet, and how easily managed by the operator without assistance; how regular the pulsations of the heart and the respiration were; and how seldom strangling and vomiting occurred. The asphyxia, which I have seen to an alarming degree when chloroform and morphine were used, has never been observed after the use of the combination of morphia and atropia.

The results, therefore, of physiological experiment and clinical observation are, that chloroform with atropine and morphine produce a certain, speedy, and safe narcosis, the quantity of chloroform required being small; that chloroform and morphia produce anæsthesia more speedily than chloroform alone, but on account of the tendency to asphyxia it is dangerous and demands most careful watching; and finally, as a result of the foregoing observations and experience, I propound the following propositions:

1. In spastic contractions of the uterus, either partial or general, during either the second or third stage, the combined subcutaneous injection of muriate of morphia and sulphate of atropia, followed by chloroform narcosis, is the most speedy, safest, and least injurious means of relieving the constrictions and facilitating subsequent operation.

2. With appropriate doses (not over 1 m.g. of atropine), and otherwise proper management of the delivery of the placenta, there is no increased danger of atony of the uterus, and consequent hemorrhage.

3. Chloroform narcosis is rendered easier and safer by preceding atropia (1 m.g.) and morphine (15 m.g.) injections.

Editorial.

The twenty-sixth annual meeting of the American Medical Association, convened at Louisville, May 5th. A noticeable and agreeable feature of the meeting was the presence of larger delegations from the South and Southwest than have attended the annual sessions since the war. Although medical colleges, hospitals, and public institutions were cut off from representation by delegates, as in previous meetings, the attendance was large.

On the part of the profession at Louisville, there was a display of Kentucky hospitality that needs to be witnessed to be appreciated. Those who partook of their good cheer need only to be reminded of the occasion, to bring vividly in remembrance a series of feasts not soon to be forgotten.

The most of the actual professional work of the meeting was done in the various sections, where a number of scientific papers of real value were read and discussed by those in attendance.

The annual address by the president, Dr. Bolling, of Nashville, was on the subject of medical education. The address evinced much care and study in its preparation; the past was fully reviewed, giving due credit to the eminent workers in this honored field, and expressing a sanguine hope for the future of medical education in this country.

Prof. S. D. Gross read a paper on blood-letting, which he denominated "one of the lost arts in medicine," in which he took occasion to laud this remedy, describing it as a therapeutic agent of wonderful power, that had unjustly gone out of use; making use of a statement that is certainly not very creditable to the profession, that "blood-letting is not more frequently practiced because it is not fashionable;" that there are fashions in the use of certain remedies, as in other things; at the same time predicting that the time was fast coming, if it were not already at hand, when a reaction would ensue in favor of a more frequent use of this valuable therapeutic agent, when the lancet would be again resorted to as one of the main reliances in the acute stages of disease, reasoning that "history is constantly repeating itself, and knowledge runs in a circle;" consequently, blood-letting will soon be in fashion again,

and this great therapeutic agent will resume its proper place as a cardinal remedy.

Whether for the purpose of counteracting any effect Dr. Gross' paper might have on the minds of the delegates, and show that blood should be injected or transfused, as well as drawn, for its therapeutical effects, or that it was only a coincident, we are not able to state of our own knowledge. However, Dr. H. M. Moore, of Rochester, New York, read on the succeeding day a paper on the "transfusion of blood." The paper was of unusual length, containing a complete history of the operation, instruments used, and results obtained by various operators, exhibiting diagrams in illustration of the subject, reciting the signal success obtained by himself in the operation, and giving the clinical history of a series of cases where he had employed this agent with good results.

We have no doubt of the value of transfusion in many cases; but in the very nature of things, it is impossible for this agent to be used by the general practitioner, any more than that the average practitioner may become as skillful a surgeon as the author of the above-named paper.

One or two other papers were read before the whole association. We think this was a mistake. All scientific papers should be referred to appropriate sections. Although the above-designated papers were of real value, they were long and occupied much valuable time, and it was an utter impossibility to discuss them satisfactorily in a meeting of the whole association; besides, such a departure from a good rule gives undue prominence to a few men at the expense of the whole. It is utterly impossible to make a set of rules to apply to Prof. A, and another set to govern the actions of modest Dr. B. According to our way of thinking, a repetition of such procedures will be very apt to cause an amount of friction that sooner or later will generate enough heat to start a little fire.

Altogether, the meeting was one of the most harmonious ever held by the association, being singularly free from heated discussions, much of which is no doubt attributable to the wise plan of referring all questions of ethics, contested seats, etc., to the judicial council, whose decision is final.

The following gentlemen were elected to fill the various offices during the ensuing year:

President—J. Marion Simms, of New York.

Vice-Presidents—First, John D. Jackson, of Kentucky; second,

Samuel Lilly, of New Jersey ; third, N. Pinckney, of United States Navy ; fourth, S. D. Seeley, of Alabama.

Treasurer—Caspar Wister, of Pennsylvania.

Librarian—William Lee, of District of Columbia.

Committee on Library—Johnson Eliot, of District of Columbia.

Assistant Secretary—Robert J. Dunglison, of Pennsylvania.

Committee on Arrangements—William Pepper, chairman ; Frank Maury, Albert Fricke, A. Hewson, S. W. Gross, William Goodsell, and T. M. Drysdale.

Committee on Publication—F. G. Smith, T. M. Drysdale, Albert Fricke, and William B. Atkinson, of Philadelphia.

OFFICERS OF SECTIONS.

Practice of Medicine, Materia Medica, and Physiology—F. G. Smith, Pennsylvania, chairman ; B. A. Vaughn, of Mississippi, secretary.

Obstetrics and Diseases of Women—Samuel C. Busey, of District of Columbia, chairman ; R. Battey, of Georgia, secretary.

Surgery and Anatomy—Alonzo Garcelon, of Maine, chairman ; E. T. Easley, of Texas, secretary.

Medical Jurisprudence, Chemistry, and Physiology—E. L. Howard, of Maryland, chairman ; E. L. Hurlburt, of Illinois, secretary.

State Medicine and Public Hygiene—B. C. Kedzie, of Michigan, chairman ; Ezra M. Hunt, of New Jersey, secretary.

The following were appointed representatives in this section from their respective States : J. B. Gaston, Alabama ; D. A. Linthicum, Arkansas ; T. M. Logan, Colorado ; B. H. Catlin, Connecticut ; L. B. Bush, Delaware ; F. Howard, District Columbia ; W. A. Love, Georgia ; H. A. Johnson, Illinois ; George Sutton, Indiana ; A. J. Fields, Iowa ; D. C. Mottram, Kansas ; Turner Anderson, Kentucky ; S. M. Bemiss, Louisiana ; S. H. Weeks, Maine ; J. A. Stuart, Maryland ; H. J. Bowditch, Massachusetts ; A. B. Stuart, Minnesota ; W. H. Armistead, Mississippi ; Frank G. Porter, Missouri ; J. H. Peabody, Nebraska ; J. W. Parsons, New Hampshire ; E. M. Hunt, New Jersey ; A. N. Bell, New York ; J. J. Quinn, Ohio ; H. Bettinger, Oregon ; Wm. F. Knox, Pennsylvania ; E. M. Snow, Rhode Island ; R. A. Kinlock, South Carolina, J. H. Vandiman, Tennessee ; J. M. Fort, Texas ; J. L. Cabell, Virginia ; A. T. Woodward, Vermont ; H. P. Strong, Wisconsin ; John Frissell, West Virginia ; W. A. B. Norcum, North Carolina ; John S. Billings, U. S. Army ; Joseph Wilson, U. S. Navy.

JUDICIAL COUNCIL.

The terms of a portion of the judicial council expiring at this meeting, the following were appointed to take their places: Levin S. Joynes, Virginia; R. N. Todd, Indiana; Robert Battey, Georgia; James E. Morgan, District of Columbia; T. B. Flagler, New Jersey; S. N. Bentram, Pennsylvania; A. Dunlap, Ohio.

PRIZE ESSAYS.

The following is the committee on the determination of prize essays: Samuel D. Gross, F. G. Smith, Alfred Stilts, E. Wallace, H. C. Wood, Pennsylvania.

The association adjourned, to meet in Philadelphia the first Tuesday in June, 1876.

Remarkable Case of Coincidence, illustrative of the well-known Fact that Men of Thought frequently reason in Parallel Lines.—In the *Nashville Journal of Medicine and Surgery*, May, 1875, we notice an original article "On the Conditions of Organic Life," credited to R. L. Wood, M.D., Kansas City, Mo. An article so similar to the above as to have similar typographical errors, appeared in the August number of the *LANCET AND OBSERVER*, 1874, credited to Dr. Z. C. McElroy, of Zanesville, Ohio. Wherefore?

Medical Chart of Temperature, Pulse, Respiration, and Regions, issued by the Case Record Company, Cincinnati. We find these charts to be just the thing for use in following the daily clinical history of individual cases. The plan is admirable. The charts when used will be both labor-saving and guess-saving. The price is very low, placing them within the reach of every practitioner. Five cents each; fifty cents per dozen, or three dollars per hundred.

Central New York Journal of Medicine and Surgery, Syracuse, New York, E. B. Stevens, M.D., Editor. The first number will be issued the first of July. Most gladly do we welcome our old friend to the editorial corps, and wish him even greater success than he anticipates, is a sentiment which we know will receive the indorsement of all the old readers of the *LANCET AND OBSERVER*.

Errata.—Page 125, seventh paragraph, for *relapsed* read *relaxed*.

THE CINCINNATI

LANCET AND OBSERVER.

J. C. CULBERTSON, M.D., Editor.

VOL. XVIII.—JULY, 1875—No. 7.

Original Communications.

Art. I.—Syphilis.

A paper read before the Union District Medical Society, at Hamilton, Ohio,
April 29, 1875, by D. A. DOUGAN, M. D., Richmond, Ind.

I beg leave to announce in the commencement, the conclusions of this paper, viz: that syphilis is a constitutional disease; that it is never anything else, and that it bears no relation to the local contagious ulcer, called variously chancre, chancrelle, soft chancre, and chancroid; that it always required constitutional treatment, and is never aborted by the destruction of its primary manifestation, the chancre.

Few persons whose attention has not been called especially to the subject, can form an idea of the prevalence of syphilis; it is not confined to the low and degraded, to the inmates of brothels, and the frequenters of dens of infamy, but it is met with in all ranks and conditions of life, in the homes of the wealthy and refined, often in the persons of innocent wives and guiltless babes. Professor Gross estimates that of the forty millions of people in the United States, not less than two millions have syphilis, an estimate so startling that we dare not believe it true; and yet the

statistics of hospitals and army practice, the only sources from which such data can be obtained, would seem to justify even this enormous estimate. I take the following figures from the address of Professor Gross, delivered before the American Medical Association, last year: During the first two years of the late war, nearly 2,300 cases occurred in our army; during the year 1862, in the French army, which then consisted of 300,000 men, 11,000 cases were reported; in the British service the proportion was still greater. At Guy's Hospital, London, 25,000 of these cases are annually prescribed for; at the Royal Free Hospital, 42,700 other hospitals report their ratio at from twenty-five to thirty-three per cent of the entire number of cases treated.

In view of such statements, may we not say truly that few subjects in medicine are invested with more interest, or call more loudly for careful, accurate, and scientific investigation?

Celsus, in commencing his treatise on venereal diseases, apologizes for the indecency of his subject. The Pope once fulminated a bull against the use of condoms, which, being used to prevent infection, were regarded as an effort to frustrate providence, who sent venereal diseases as a punishment for licentiousness. An ancient Scotch law banished to a lonely island every person affected with venereal diseases, and with them every person who attempted their cure; leaving them without help or hope of relief, a prey to the effects of their own licentiousness. To-day, no question connected with the relief of suffering, the cure of disease, the protection of posterity, or the welfare of communities, is beneath the dignity of the enlightened physician or under the ban of the law. While we may, in the capacity of citizens, use our efforts for the suppression of vice and crime of every form, as physicians, it becomes us to acquaint ourselves with every phase of disease, and lend our aid alike to the sinner and the saint.

While it seems certain, from a study of medical literature, that for a time succeeding the epidemic outbreak of syphilis in Italy, in 1494, the three venereal diseases were distinctly recognized and the nature of each understood, there soon followed a confusion of ideas, in which all distinction was lost, and it was not until the closing portion of the last century that any attempt was made by the profession to escape from this confusion.

Although but few writers of reputation accept the theory that syphilis was introduced to the European countries by the sailors of Columbus' expedition, there is but little doubt that at that time it

spread with an alarming rapidity through countries and localities where it had hitherto been unknown. The testimony of those who have specially studied it, is that the disease has existed from the most remote antiquity. Professor Gross, in the address already quoted from, repeats the belief that has often been advanced by others, that, of Bible characters, both Job and David were most likely victims of it, and that their putrid sores and nightly pains were the tertiary manifestations. It is said that the records of Chinese medicine of more than two thousand five hundred years before Christ, give evidence of a knowledge of the disease and its treatment by mercury. But whatever conclusion may be arrived at as to its origin or antiquity, the latter part of the eighteenth century witnessed an extreme professional ignorance of the subject, coupled with a spirit of inquiry, which, constantly augmenting, has at last led its followers to what we believe to be the truth.

If we commence our studies with the teaching of John Hunter, we find that eminent surgeon firmly convinced that gonorrhea, syphilis, and those ulcerations now termed chancreoid, were but different manifestations resulting from the same cause; that the pus of a chancre would produce gonorrhea, and the inoculation of gonorrheal matter result in syphilis. In 1786, he published a work, in which this is one of the distinctive principles taught, and his experiments are cited in proof of its correctness. Six years later, Benjamin Bell published a treatise on venereal diseases, in which Hunter's views were controverted, and the writer gave in detail his experiments, which clearly proved the existence of a virus that produced gonorrhea, which was separate and distinct from that of chancre. From this time forward, surgeons were divided into two classes—one holding the doctrines of Hunter, the other those of Bell; and the amphitheatres of the great hospitals of Europe served as the field of many an oratorical battle over the question; by both sides almost countless experiments were performed, and each party confidently pointed to their experiments as proof of their theory. During the second quarter of the present century, Ricord and Vidal published their views, and, in effect, rehearsed the controversy of Hunter and Bell; and even so late as twenty years ago, Professor Blackman, in translating the work of Vidal, gives his concurrence to the author's views, regarding the venereal diseases as all emanating from the same poison, its different effects depending on peculiarities in the party inoculated. At present, there is no need to discuss this part of the subject; the belief has

been entirely abandoned, and it now slumbers among the errors of the past. During the time these investigations were in progress, another inquiry began, with which we are more directly interested. From the first, observers had noted that not every person who had a venereal sore afterward developed the train of symptoms entering into the history of syphilis. Hunter, in his experiments, observed that when he inoculated a fresh spot upon his patients with pus taken from the chancre, sometimes it was followed by the production of an ulcer, resembling the one from which the inoculated pus was taken, and at other times no sore was produced, drawing the inference from this that the auto-inoculable pus was more virulent than the other. He asserted that the ulcer which secreted pus of this character was the one most apt to be followed by the regular series of constitutional manifestations. Another fact noticed by him, the observation of which, more than any other circumstance, connects his name prominently with the study of syphilis, was that the syphilitic disease more frequently followed chancres which were characterized by induration; and by the right of discovery, the hard chancre became known as the Hunterian chancre, a name that is still applied to it. Hunter's lack of accuracy in observation will be noticed hereafter.

But upon this question, as upon the unique character of all venereal disease, discussion arose, and experimenters busied themselves in the attempt to discover why it was that what was universally admitted to be the same cause should produce different effects; for even the secondary manifestations of syphilis were at that time but imperfectly understood and classified, while the tertiary had not been recognized at all. In 1814 Carmichael of Dublin advanced the idea that there were four varieties or modifications of the syphilitic virus, one of which was confined in its action to the local sore, another was followed by glandular enlargements, the third by eruptions upon the skin, and the fourth by ulceration of the tonsils. Still later, Ricord, who had given the *coup de grace* to the belief in the syphilitic nature of gonorrhea, but who believed in the identity of the virus produced by ulcers, explained the difference in its action, by assuming for its recipients idiosyncracies, these determining in each case what its subsequent action should be; but to Bassevan, a pupil of Ricord, is due the credit of having first arrived at what is now the accepted belief of by far the greater number of surgeons. In 1852 he published a work giving the analysis of one hundred and seventy cases, in which he employed the system

of confrontation, that is, he examined the persons from whom his patient received the disease. His study of these one hundred and seventy cases resulted in the discovery that inoculation from a non-infecting ulcer, *always* produced a non-infecting ulcer, and in no case was followed by syphilis, while inoculation from syphilitic lesions, whether primary or secondary, always produced a chancre, to be followed in due time by secondary manifestations; hence, he announced the law, that syphilis always followed a chancre, and that from the other variety of ulcer, which he named chancroid, it never followed; that the virus of one was totally and radically distinct from the virus of the other, and that neither age, sex, temperament, hygiene, or idiosyncrasy was sufficient to convert the poison of one into that of the other. Later, these views were confirmed by a host of others, who followed the same system of observation, and in addition practised direct inoculation upon fresh patients, making comparisons between the parentage of the ulcer upon the one hand, and its offspring on the other. At present the majority of the profession are in accord with Bassveau's treatise, but it must be confessed that the minority, who still believe in the unicity of the two kinds of ulcer, includes a few men of prominence.

This hasty review of the history of the subject, brings us to a reiteration of the statement made in the early part of this paper, viz: that syphilis is a constitutional disease, caused by the absorption into the system of a specific *materies morbi*, which, after an incubative period, manifests itself by certain characteristic lesions, and, uninfluenced by treatment, having a tendency to involve in its destructive progress all the different tissues of the body. Its methods of propagation, enumerated in the order of their frequency, may be set down as:

1st. Sexual intercourse.

2d. Inheritance.

3d. Accidental contact with the secretion of chancres, secondary lesions as ulcers, or mucous patches, and in some instances, though rarely, from tertiary lesions.

4th. Vaccination.

Inherited syphilis has no sign to mark the commencement of the disease. It is general and constitutional from some period of foetal life, perhaps from the beginning of the development of the ovum. A woman may, it is believed, receive the infection through a foetus in utero (it being the offspring of a syphilitic father), and give evidence of such infection without ever having a chancre. With

these two exceptions, the first evidence of syphilis is always a chancre at the spot where the virus was first absorbed. No matter whether the infection be received from a chancre or mucous patch, through vaccination or any accidental source, the first evidence that the system is poisoned is the production of a chancre. That the chancre is not, like the chancreoid, the result of the direct action of the virus upon the tissues receiving it, is evident from its history. No appreciable interval occurs between the reception of the poison and its result in chancreoid, the redness and vesicle often being observed in a few hours, and ulceration by the third day. Chancre, on the other hand, does not make its appearance until a much later date, and in the meantime, in many cases, no sign is given of its approach. If an abrasion occur at the time of inoculation, it heals, and the tissues resume their normal appearance, unless, indeed, dirt or the irritation of clothing should establish inflammatory action. After a time, usually about three weeks, sometimes earlier sometimes later, the chancre makes its appearance as a papule, a tubercle, or an excoriation, either of which may be converted into an ulcer, but whether it ulcerate or remain throughout as a papule or tubercle it will, in some part of its career, in nearly every case (Van Buren says at least nineteen out of twenty), rest upon an indurated base—this induration to be distinguished from the induration attendant upon inflammation by its well defined, abrupt limit, its peculiar, cartilage-like resistance, and its freedom from pain. It may last from a few days to several months, and in exceptional cases, may remain long after the disappearance of the chancre itself. During the existence of the chancre the lymphatic glands nearest it become enlarged; if, as in the inguinal region, there be a series in direct communication, more than one will be apt to take part in the enlargement, which is rarely great and has no semblance of inflammation, the gland being freely movable beneath the skin. The chancre and enlarged glands constitute the first chapter in the history of the case; a second period of incubation follows, its product being the efflorescences, ulcerations, pigmentations, and inflammations known as secondary manifestations. The third stage, which does not always supervene, is marked by destructive processes that may involve every tissue and organ of the body. The manifestations of developed syphilis may be said to take on the appearance of almost every hue and variety of disease. Sometimes obscure and unsuspected, and complicating other diseases, it baffles all efforts at treat-

ment, at other times, uninfluenced by therapeutic control, it may alone destroy life by a sudden and malignant attack upon some vital organ.

Chancre being the initial lesion of syphilis, its diagnosis is of the greatest importance. With the clear and definite teachings on the subject, it is not creditable to a medical man now, whatever may have been the case a few decades since, to give mercury indiscriminately to all patients with sores upon their genital organs. Although herpes, balanitis, and tertiary ulcerations occasionally require exclusion, that from which chancre is to be chiefly differentiated, and with which it is so often confounded, is the local contagious ulcer known as chancroid.

The diagnosis may be aided first by the appearance, chancroid being generally recognized as a vesicle which quickly bursts, leaving an ulcerating cavity with clear-cut edges, presenting an appearance which has been aptly compared to a hole cut with a punch, the ulcer secreting pus in abundance. Chancre, on the other hand, usually commences as a tubercle or an abrasion, which may in time take on the appearance of an ulcer with sloping sides, and secreting a sanious fluid, scarcely ever purulent.

The chancroid, unless irritated, reposes upon a soft base. The chancre has beneath it an induration, which clearly made out and separated from inflammatory induration, is absolutely pathognomonic.

Chancre is accompanied by syphilitic bubo, an enlargement of the inguinal glands, in which they attain the size perhaps of peas, and are freely movable beneath the skin, the whole chain of glands being separately enlarged. Chancroid, when followed by bubo, is distinguished by the inflammatory character of the enlargement, one single gland attaining the size of a hickory-nut, or several matted together producing a tumor of even greater size. Chancroidal bubo often suppurates; syphilitic, rarely or never. In addition to the above, chancroid is at times followed by virulent bubo, which is the consequence of direct absorption of the chancroidal virus by the lymphatic vessels; in this case, when the bubo opens, it leaves an ulcerating cavity which possesses all the characteristics of a chancroid, its pus being auto-inoculable.

Another most valuable diagnostic point, but one which should be employed in conjunction with others, is the time which has elapsed since exposure to infection—chancroid nearly always making its appearance before the tenth day, often before the third ;

chancre rarely before the tenth day, oftener in about three weeks.

Another character remains to be noticed, that under proper observation furnishes unimpeachable evidence of the character of the sore. A drop of pus taken from a chancre and inserted beneath the epidermis of the same person, will give rise to an ulcer of the same character and secreting in turn auto-inoculable pus; while pus from a chancre inserted in the same manner gives rise to no disturbance, save the slight inflammation that may result from the puncture.

Each of these characteristics is of value, but each is attended by a certain amount of fallacy. First, the appearance may mislead; a chancreoid untreated, nearly always, and a chancre sometimes, becoming an ulcer of considerable dimensions and irregular in form, so that unless seen in its early stages, its form and character may afford no assistance. Induration, one of the most valuable diagnostic characteristics of chancre, may be simulated more or less closely by the inflammation surrounding an irritated chancreoid, while gangrenous ulceration of a chancre is apt to be associated with a disappearance of its induration. Chancre, if irritated by caustics, as is often done in the vain effort to abort the disease, may be attended by suppurating bubo, the pus of which, however, is never auto-inoculable. We have seen that chancreoid may sometimes be delayed as long as ten days from the exposure, and that chancre may occur as early as ten days; hence, sores that first appear about this time are to be investigated more closely than others. Lastly, a person may receive at the same time virus from a chancreoid and a syphilitic lesion; in which case there will be developed an ulcer, which, with all the characters of a chancreoid, may afterward become a chancre, and, of course, followed by syphilis. These are the cases that misled Hunter and his followers, and caused them to regard the auto-inoculable ulcer as *par excellence* the syphilitic, and they still mislead many able surgeons. If the above were all that need be said on the subject, the diagnosis of chancre, though requiring care, would not be difficult. But, unfortunately, patients do not always consult us on the third day, or the tenth day; sometimes they present themselves with uncertain-looking sores, and because of their dissipated habits, are unable to fix the time at which the infection was received; or perhaps they have been under another's treatment and can not describe the early appearances of the lesion. In all such cases, when a diagnosis can not be made with reasonable certainty, the only proper plan is to post-

pone constitutional treatment until secondary symptoms have settled the point in doubt.

The diagnosis of chancre made, the patient has syphilis and is a candidate for constitutional treatment. The idea that the destruction of the sore by caustics will avert the disease, is obsolete. We understand now that it is not because of the chancre the patient has syphilis, but that he has a chancre because he is syphilitic—the chancre being a manifestation of established disease in the same manner that the vaccine vesicle is a manifestation of vaccinia.

Following the chancre comes a period of variable duration—three weeks, and six months, being the limits in most cases—a period marked by no external evidence of the zymotic action of the virus, and terminated by the eruptions and other lesions, known as secondary manifestations. The eruption may be a single one, as roseola, or several following each other in succession, or existing together—as papular, pustular, scaly, on the skin, and mucous patches upon mucous membranes, together with superficial ulceration of the tonsils and pharynx, and iritis. A given patient may have all or few of these with many others, and they may be scattered over months, or perhaps years, to finally disappear or become merged in the deeper-seated and more destructive tertiary lesions. The secondary outbreaks, even if untreated, rarely compromise the usefulness of any member or function of the body, with perhaps the exception of iritis; but if the secondary are comparatively harmless, the tertiary developments are attended at times by rapid and frightful loss of tissue, by excruciating suffering, and even by sudden death. Tertiary syphilis can not be assigned a definite time—generally a year at least elapses from the beginning of the disease; at times it may be many years, and in not a few untreated cases this stage never occurs. Its lesions are, upon the skin and mucous membranes, deep ulceration; in the bony tissues, nodes, periosteal inflammations, caries, and necrosis; within the cranium, tumors developed either from the skull or the membranes, and producing headaches, paralysis, and death. No organ or structure of the body is exempt from its ravages. The manner in which its destructive effects are produced, is through the agency of the so-called gummy tumors or gummy infiltration of tissues—a neo-plastic formation, which, destroying the tissues in which it is developed, itself breaks down, to be discharged by ulceration, or if absorbed, leaving a blank to be filled by connective tissue.

From the consideration of the history, symptoms, and pathology

of syphilis, we may turn our attention, with satisfaction, to its treatment. Rightly understood and properly treated, there are few diseases that illustrate more forcibly the value of the bold but judicious employment of the resources of our art.

Treatment of syphilis is general and specific. Under the head of general, may be ranged food, rest, light, air, exercise—everything, in short, that pertains to the general condition—and which are always to be kept in mind, even to the extent of withholding specific remedies upon the least intimation that their use is exerting an unfavorable effect upon the general health. Among specifics, two stand pre-eminent—mercury and iodine; mercury for the earlier, and iodine for the later stages. For chancre and the earlier of the secondary outbreaks, prot. iodide of mercury in doses proportioned to the individual; for the later secondary, and earlier and milder tertiary lesions, mercury, with iodide of potassium; and for the late ulcerations of the tertiary stage, more especially the rapidly advancing, iodide of potassium alone in large doses. With these remedies, carefully managed and their action closely watched, few cases will be found in which good may not be done, and in many the results will be brilliant and effective in the highest degree. Cases may be encountered occasionally that resist treatment, or are unable to bear the administration of either mercury or iodide of potassium, but these are the exception. The great error in treatment, as often administered, is lack of system. The patient with chancre is told to take mercury until his chancre disappears. So of the eruptions, and in the later stages the remedies indicated by the lesion. The consequence is, he goes through life with uncured syphilis constantly breaking out in some of its protean forms. When we come to recognize syphilis as a curable disease, and use our remedies with the confidence they are deservedly entitled to, we will have fewer cases of relapse. Perhaps it is too much to say that syphilis may be finally and completely eradicated from a given individual; but we are warranted in believing that it may be kept under in so far that it may never inconvenience the patient, infect another, or be transmitted to his posterity. Instead of a few weeks of mercury, terminated by a prescription for a four-ounce solution of iodide of potassium, patients should be urged to submit to the inconvenience of a course of treatment commencing with the beginning of the disease and prolonged for not less than one and a half or perhaps two years. By this means, secondary symptoms become less annoying and of shorter duration,

while tertiary may be entirely prevented in many cases. Each individual case is to be considered separately, and as in every other form of disease, peculiarities, idiosyncracies, or constitutional tendencies must be respected. Some patients can not take mercury, though it seems to be a fact that the presence of syphilis occasions a tolerance of this drug even in those who, under other circumstances, would be salivated by the most minute quantities; others, again, may take it in the ordinary way without experiencing its good effects, but are rapidly benefited by inunctions and fumigations.

Although it would seem, from an examination of the evidence, that the question of syphilis following soft chancre should be no longer a subject of discussion, but should be laid aside with the kindred one of the syphilitic nature of gonorrhea, some of the great names of surgery still lend themselves to the delusion, and it is occasionally discussed in journals and in lectures, under the head of unity or duality of the syphilitic virus. Hunter, as we have already seen, believed not only in the syphilitic nature of both kinds of ulcer, but also recognized gonorrhea as one of the lesions of the same disease. That Hunter and his followers labored under error, is apparent to any one who will read the record of their observation. Hunter inoculated a patient with pus from a chancre, and at the newly inoculated point another chancre was developed. Another patient was experimented on likewise, but the pus taken from his sore and reinstated beneath the skin produced no second ulcer, and yet syphilis followed. Here was proof of the syphilitic nature of both. In the first case, the virulent nature of the virus, as shown by its ready infection of a new spot, was conclusive; in the second, the constitutional symptoms following were likewise conclusive, but the fact that they were so long delayed was given as evidence of the comparative weakness of the poisoning matter.

Again, Hunter, who first called attention to the induration of true chancre, did not understand how to make the best use of his own discovery. He described chancres as sometimes commencing in twenty-four hours from the time of infection, and says he has frequently seen them take on induration in less than three days. It is evident to us that he did not separate the induration of inflammation, occurring with chancre, from that which is essentially syphilitic. He thought that the secretions of secondary lesions were different from that of chancre, because auto-inoculation could

not be produced therefrom, the real reason being that the patient already having syphilis could not again contract the disease.

All the old writers, of course, considered inflammatory bubo as part of syphilis. Ricord classified buboes into seven different varieties, one of which he believed to result from the absorption of syphilitic virus. John Hunter guardedly admits the occasional occurrence of bubo, not preceded by chancre, but thinks that, even in these cases, a chancre must have existed, so small as to escape observation. He is evidently perplexed to know how to explain such cases. To us it seems they were cases of real syphilitic bubo. These inquiries into the records left by the men who studied venereal diseases during the three first quarters of the last century, furnish many curiosities of study, but the substance of their value is represented by the discovery on the part of Ricord, who was the first to make use of the speculum in such cases, that females, with gonorrheal inflammation of the vagina, might have chancres upon the cervix uteri, thus explaining the manner in which the older observers had been deceived; for from such women men would be apt to contract both diseases, and as syphilitic outbreaks occurred after the gonorrhea, it was not unnatural that they should be considered a part of the same disease. This, and Basserau's discovery, may be noted as the two most important contributions made to the study of venereal diseases since its real study began. The details have been carefully considered, and accurately described and discussed, by many of the best minds in the profession since, until, from having been among the least, it is now among the best understood diseases with which we have to deal.

Art. 2.—Digitalis as a Remedy.

By EDWARD B. STEVENS, M.D., Professor of Materia Medica in the Syracuse University, New York.

Several aspects of study are suggested when we come to the consideration of any important drug. The first prominent question has direct reference to the effects of the drug upon the system at large, or upon some important direction of the system. But second, and subordinately, so far as therapeutic purposes are

to be served, is the way, the *modus*, by which results are to be produced. And then, with the first factor, perhaps somewhat modified by the second, we come, thirdly, to the therapeutic uses of the drug. In our professional pride, we are very apt to think that we use a drug strictly on rational principles; but I suspect that, with many medicines, we are very apt to become routine or empirical; that is, while, perhaps to a degree, we use the drug upon the representations of others or the past, yet mostly we employ many agents almost absolutely on empiric principles.

These remarks would apply, perhaps, very well to a large range of medicines which enjoy the favor of the profession. But, just now, I propose to utilize this range of thought in the consideration of the therapeutic uses of *digitalis*.

Some years ago Dr. Gundry, then superintendent of the Southern Ohio Lunatic Asylum, at Dayton, asked my opinion as to the value of digitalis as a therapeutic agent. I expressed, at that time, what I thought was the general sentiment of the profession, as well as my own; that it was irregular, uncertain, and, perhaps, unsafe. He replied to me, that his experience with the insane was very opposite to current opinion, and that he used it freely, gave large and frequent doses—doses of say, one ounce of the tincture—that in many cases he had valuable results, and in none, the dangerous effects that are spoken of by various writers, and have come to be regarded as fixed from mere authority.

These representations set me to a course of inquiry and experiment, all of which leads me now to present this article.

Of course there is no necessity for any detail of the botany and materia medica of digitalis in such a paper as this, because all this is carefully and minutely given in Periera and other standard authorities. What we want to know is, the effects on the system which small or large, or continuous doses, will produce—and about this there is a good deal of contradiction and confusion—so that we are obliged to cull a very moderate amount of pure grain from a good deal of chaff.

Whether digitalis be an arterial or nervous sedative, in its strict primary operation, admits of some question, as indeed it is made a question; but that it is a controller of the heart's action, either directly or indirectly, is beyond question. But my own experience has been that such control is not uniform as to character or degree. I am also satisfied, however, that this irregularity of action is

very materially controlled *by position*. Thus, it seems very well established by experience confirmed by theory, that while under the influence of digitalis, the patient should be kept in the recumbent position; because the heart being weakened, a sudden change to the erect posture, would overtax the heart's lifting capacity, and syncope be the result. So, it is quite possible that neglect to observe this precaution may account for irregularities of action observed both with others and myself.

Some of the facts reported, and views expressed, as to the effects of this drug, certainly seem contradictory and not easy to reconcile. Thus Bence Jones thinks digitalis is, in the first place, a stimulant, but in large doses, or continued doses, it becomes a decided sedative to the heart. Is it not quite possible that this primary stimulant action is rather apparent than real, and that this question of position may have obscured the real effects which were being produced? Thus Sir Henry Holland says (though in explanation of another point yet applicable in this): "More attention is required than is always bestowed in estimating the actual changes in the pulse. It is not enough to feel it once, or in one posture only. The difference between recumbency and the upright posture will often totally alter its character. . . . It should be examined also, after some cordial has been given, to ascertain the facility of bringing it back to its ordinary state. An inference may be formed at one moment, or under one posture, which the lapse of five minutes and change of position will altogether belie."

Another discrepancy is suggested, not easy to reconcile. Digitalis, as well as several similar articles—say lobelia, cimicifuga, aconite—all stimulate the secretions. The fact seems very well established, but why a sedative should secure increased action of the kidneys, or any other important secreting organ, is not clear. Broom, savin, and like agents, excite an increase of urinary secretion, but we can scarcely understand digitalis as acting in the same way—and yet these are substituted, one for the other, as diuretics, without any satisfactory explanation.

So, too, we find authorities speaking of digitalis as a *tonic* as well as *sedative*. Thus we find this drug, suggested for these conjoined influences, more particularly in the treatment of heart affections. These contradictions, or apparent antagonisms in therapeutics, only suggest to us that we are not yet accurate in our notions of the ex-

act influence of this agent upon the system in its various directions of impression.

Another point is, not only the questions of the cumulative action of digitalis, but its relation to the *persistence* of action.

So far as the cumulative action of digitalis is concerned, while this drug has been regarded for indefinite years as the type of this peculiar sort of action, I am well convinced that it is extravagantly represented, and that, with our present experience, the probability is that there is no peculiarity of action in this respect. So, too, incidentally, I suggest that this whole question of cumulative action is mostly a myth. But it seems pretty well established that the peculiar effects of digitalis are not very immediate; thus a few repeated doses may act very promptly, or there may be several hours of delay, and yet the drug will, or may by and by, produce very positive and specific effects. This only indicates the *persistence* of this agent—often slow to act, but sure and persistent; the effect when produced being comparatively a permanent effect.

The prominent therapeutic uses of digitalis serve still further to illustrate its nature and peculiarity of action.

Thus, if we take the whole range of *acute inflammations*, we find a disposition to employ this agent very much as we use *veratrum viride*—that is, as a sedative or depressant of the heart's action, and yet I am very confident that, for the control of most acute inflammations, digitalis is not so desirable as other agents. And yet it certainly does have a control over the circulation; and with a physician who is familiar with his agents, or in the habit of their use, I can readily understand that it might be a valuable resource, but not to him who only uses it at accidental or occasional times.

So, too, take its influence over the secretions, thus affording to us a remedy in *dropsical* conditions. How does this drug promote the urinary discharge? If we accept the idea of its depressant action, then we are at a loss to account for the stimulant effect upon the kidney; and while I am confident that in many cases it does increase the urinary secretion, yet I presume it does so indirectly. Thus, by a relaxing impression upon the general secretory functions, it is probable that associate secretory functions are influenced.

And yet I suppose digitalis is useful as a remedy in various forms

of dropsy, aside from its influence over the kidney. Thus, if the dropsy be dependent on organic changes in the heart, or upon tubercular deposits in the pulmonary structure, then we have good reason for a control of organic action which may be afforded by digitalis. My own experience, I think, corresponds with author's, that the dropsy of acute diseases, and especially scarlatina, is a peculiar indication for the use of digitalis.

Again, organic affections of the heart have been pointed as proper cases for the use of this remedy. Why? In most cases there is a necessity for a control of the heart's action; a remedy which will be steady and persistent. To meet some of these indications, I am in the habit of using digitalis in combination with other similar agents; thus, I give digitalis with some of the preparations which contain or represent *prussic acid*. Long ago, Dr. Corrigan, of Dublin, called attention to an important matter in regard to heart disease. He suggests, very pertinently, that if the defect be in the aortic valves, that the enfeebled condition already affords regurgitation; hence, this organic change forbids the use of such a remedy as digitalis, because its influence would be to increase the difficulty—certainly a very plausible exception to the use of the remedy.

Having trespassed upon the reader thus far, I can not, in this article, do what I intended—that is, express my views of the specific value of this medicine in particular diseases. What I most desired, however, I have very nearly accomplished—which is, to use therapeutic experience to suggest the real therapeutic value of this drug; and I feel very sure that a more careful use and experience with digitalis will afford to the profession a renewed, or, any rate, an enforced confidence in its value. All this omits any consideration of the active principle, digitalis, which would undoubtedly afford a more uniform means of administration.

Art. 1.—Scarlet Fever in the United States.

A Study of the Mortality Statistics of the Ninth Census, including an inquiry as to the seeming effect of Geographical Position, Temperature, and Altitude on the Disease. By THOMAS C. MINOR, M.D., Cincinnati, Ohio.

[CONTINUED.]

It will thus be seen that there were nineteen in the first quarter; twenty-seven in the second; thirty-nine in the third, and forty-seven in the last. Sixty-two of the decedents were males and seventy were females; fifty-eight of American and seventy-four of foreign parentage. Four of them were adults. The general statistics of scarlatina for eighteen years are as follows:

Deaths in Providence from Scarlatina.

YEARS.	SEX.		PARENTAGE.		WHOLE NUMBER.
	Male.	Female.	American.	Foreign.	
1856.....	75	69	74	70	144
1857.....	13	19	18	14	32
1858.....	34	33	38	34	72
1859.....	24	21	31	14	45
1860.....	7	10	11	6	17
1861.....	12	16	14	14	28
1862.....	6	8	3	11	14
1863.....	13	20	16	17	33
1864.....	68	73	50	91	141
1865.....	55	53	49	59	108
1866.....	1	2	2	1	3
1867.....	3	7	7	3	10
1868.....	26	24	16	34	50
1869.....	61	77	52	86	138
1870.....	15	20	13	22	35
1871.....	13	8	9	12	21
1872.....	8	11	8	11	19
1873.....	62	70	58	74	132
Total.....	496	546	469	573	1,042

CONNECTICUT.—Deaths from scarlatina, 286; males 152, females 136. 188 of the decedents were children under five years of age. Season of greatest mortality, spring. Month of greatest mortality, April. Temperature, 46° Fahr. Average altitude of State above the sea level, 300 feet.

Reflections.—Population in 1870 was 537,454. 58,635 of this population were children under five years of age. Out of every 312 children under five years of age, one died of scarlatina. Cool weather during month of greatest mortality. With three exceptions all the decedents were white. Epidemics of scarlatina occur in the State from time to time. Dr. Daniel Holt, of Glastenburg, describes an epidemic occurring in 1840.*

* Boston Medical Journal, Vol. XXIV., 1841, p. 133.

MASSACHUSETTS.—Total deaths from scarlatina, 911; males 459, females 452. 607 of the decedents were under five years of age. Season of greatest mortality, summer. Month of greatest mortality, June. Maximum and minimum temperature, 68° and 62° Fahr. Average altitude of State above the sea level, 400 feet.

Reflections.—Population in 1870 was 1,457,351. Of this population, 156,889 were children under five years of age. Out of every 259 children under five years of age, one died of scarlatina. Warm weather month of greatest mortality. Only two of the decedents were blacks. Epidemics of scarlatina frequently occur—one of the earliest mentioned epidemics, before spoken of, occurring in 1795. “In 1849, the deaths by this disease formed very nearly six per cent. of all the deaths in the State, and in 1852 nearly five per cent.”*

Dr. Enoch Hale speaks of an epidemic occurring in 1844.†

Dr. Edward Warren, of Newton, has given an account of another epidemic.‡

Indeed, the disease is quite common in Massachusetts. The reader in search of more voluminous information regarding this point, is referred to the elaborate compilation of statistics to be found in the registration reports of the State.||

EN RESUME.—The total number of deaths in New England from scarlatina, during the census year 1870, was 1,955. These deaths were distributed through the different months as follows:

March.....	225	October.....	88
April.....	176	November.....	119
May.....	173	December.....	167
June.....	199	January.....	193
July.....	173	February.....	191
August.....	138		
September.....	113	Total.....	1,955

As regards season of the year, the most deaths occurred in winter and spring—the colder seasons. Spring, 574; summer, 510; autumn, 320; winter, 551. Of the decedents, 1,002 were males and 953 were females. As the female portion of the population exceeds the male population by over 70,000 in New England, it will at once be seen that the mortality from scarlatina was greatest among

* Boston Medical and Surgical Journal, 1854, p. 86.

† New England Quarterly Journal, Vol. I., p. 19.

‡ Boston Medical Journal, Vol. XXIV., 1846, p. 89.

|| Registration Reports of Massachusetts, 1859–72.

the male sex. The seeming influence of altitude on the disease may be seen in the following table :

STATE.	AVERAGE ALTITUDE.	DEATHS FROM SCAR-		DEATHS IN POPULA-	
	FEET.	LATINA TO AGGRE-	GATE POPULATION.	TION UNDER FIVE	YEARS OF AGE.
Maine.....	375	1 in every	1,486	1 in every	278
New Hampshire..	625	1 “	3,316	1 “	593
Vermont.....	600	1 “	6,122	1 “	1,168
Rhode Island....	125	1 “	1,169	1 “	198
Connecticut.....	300	1 “	1,880	1 “	312
Massachusetts....	400	1 “	1,600	1 “	259

In Maine, Rhode Island, Massachusetts, and Connecticut—States having an average altitude of 400 feet and under—the total deaths from scarlatina were 1,805, to a population numbering 2,839,073, thus giving one death from the disease to every 1,568 of aggregate population. In New Hampshire and Vermont—States having an altitude of 600 feet and upward, and a population numbering 648,857—there were 240 deaths from scarlatina, or one death to every 2,704 of aggregate population. From this statement it is easily seen that the following proposition can be safely made :

Altitude in the New England States seems to diminish the tendency to scarlatina.

This proposition is the stronger for the reason that the death-rate to aggregate population, and the death-rate to the population under five years of age, seem to coincide, when looked at and studied in their seeming relations to altitude. The dense population to the square mile in Rhode Island and in Massachusetts must be considered as an important point. These States are the two most densely populated in the United States, and as overcrowded localities are the harvest-fields of contagious diseases of all kinds, this fact must be taken into consideration in judging of the seeming effects of altitude on the disease. We now turn to the study of the disease as it prevails in the *Middle States*.

NEW YORK.—Total deaths from scarlatina, 3,403; males 1,745, females 1,658. Of the decedents, 2,295 were under five years of age. Spring was the season of greatest mortality. The month of greatest mortality was January. The maximum and minimum temperature was 31° and 18° Fahr. Average altitude of the State above the level of the sea, 800 feet.

Reflections.—Total population, 4,382,759. Of this population, 520,528 were under five years of age; so that to every 227 of population under five years of age, one died of scarlatina. The weather

was cold at the period of greatest mortality. Only 25 of the decedents were colored. Epidemics of scarlatina frequently occur in the State. Says Dr. Levi Wheaton :* "On the borders of the Hudson, where bilious fevers prevailed in 1794-95, I had abundant opportunities to treat scarlet fever, which was epidemic."

Dr. D. H. Squier,† of Elmira, states that epidemic scarlatina sometimes shows itself at that point. The disease has prevailed as an epidemic, at Troy, on several occasions, according to Dr. Thomas C. Brinsmade.‡ At Buffalo, Dr. Langworthy§ states: "The number of deaths is unprecedented in this city for any one year." The mortality, during this epidemic of 1862, in Buffalo, was 205.

In the city of New York the disease appears as an epidemic every few years; indeed, it is almost endemic, and may be considered one of the most fatal of the intercurrent diseases of the metropolis. I have compiled the following table from a number of various sources. For the more early statistics of scarlatina, I am indebted to an article written by Dr. Joseph M. Smith ;|| for more recent statistics, to Dr. Cyrus Ramsay.¶

YEAR.	DEATHS.	YEAR.	DEATHS.	YEAR.	DEATHS.
1804.....	14	1824.....	3	1844.....	225
1805.....	4	1825.....	10	1845.....	63
1806.....	4	1826.....	24	1846.....	114
1807.....	2	1827.....	4	1847.....	142
1808.....	4	1828.....	11	1848.....	93
1809.....	9	1829.....	188	1849.....	266
1810.....	1	1830.....	246	1850.....	311
1811.....	0	1831.....	258	1851.....	627
1812.....	0	1832.....	221	1852.....	613
1813.....	1	1833.....	179	1853.....	392
1814.....	1	1834.....	418	1854.....	517
1815.....	0	1835.....	174	1855.....	1052
1816.....	0	1836.....	202	1856.....	1283
1817.....	3	1837.....	579	1857.....	1325
1818.....	0	1838.....	257	1858.....	668
1819.....	5	1839.....	158	1859.....	840
1820.....	5	1840.....	191	1860.....	1927
1821.....	3	1841.....	366	1861.....	1278
1822.....	1	1842.....	416	1862.....	928
1823.....	2	1843.....	223	1863.....	903

Total..... 17,754

Dr. James G. Watt, health officer of Brooklyn, has kindly fur-

* Boston Medical Journal, Vol. XXXIX., 1849, p. 176.

† Transactions State Medical Society of New York, 1855, p. 134.

‡ Transactions State Society of New York, 1858, p. 279.

§ Transactions State Society of New York, 1863, p. 235.

|| Transactions Amer. Med. Association, Vol. XIII., 1860, p. 183.

¶ Transactions Amer. Med. Association, Vol. XV., p. 246.

nished me the following statement regarding scarlatina in that city:

YEAR.	DEATHS.
1870 (8 months).....	136
1871	528
1872	327
1873	314
1874	479

From these statements it will be seen that the larger cities of New York suffer severely at times from the disease.

NEW JERSEY.—Total deaths from scarlatina, 781; males 404, females 377. Of the decedents, 511 were under five years of age. Spring was the season of greatest mortality. May was the month of greatest mortality. The maximum and minimum temperature was 60° and 58° Fahr. Average altitude of the State above the level of the sea, 200 feet.

Reflections.—Population, 906,096. Of this population, 119,623 were under five years of age; so that out of every 235 of the population under five years of age, one died of scarlatina. The weather was warm during month of greatest mortality. All the decedents but 19 were whites.

PENNSYLVANIA.—Deaths from scarlatina in 1870, 5,645; males 2,833, females 2,812. Of these, 3,863 were under five years of age. Spring was the season of greatest mortality. March was the month of greatest mortality. The maximum and minimum temperature in that month was 45° to 38° Fahr. The average altitude of the State above the level of the sea is 750 feet.

Reflections.—Total population, 3,521,791. Of these, 492,341 were under five years of age; so that out of every 128 of the population under five years of age, one died of scarlatina. The weather was cool the month of greatest mortality. All the decedents except 36 were whites. Epidemics of scarlatina occur from time to time in this State. Dr. Felix Pacalis, in a communication dated Philadelphia, February 8, 1802, says: "We have been visited, during the last winter month, by the scarlatina anginosa or cynanchica (scarlet sore throat").*

Dr. Callaghan, of Pittsburg, says: "Scarlatina anginosa appeared in the city in the month of May, 1830, and continued to January, 1831."†

Dr. B. F. Schneck, of Lebanon, states, "During the past twelve

* Med. Repository, New York, 1803, p. 163.

† Boston Medical Journal, Vol. IV., 1831, p. 240.

or fourteen months, a severe epidemic of scarlatina has prevailed in my neighborhood."*

Dr. A. P. Dutcher speaks of an epidemic occurring at Enon Valley about the same time.†

At Pittsburg, in 1871, there were 90 deaths from scarlatina; in 1872, 61 deaths; in 1873, 122 deaths. Says Crosby Gray, the health officer: "Scarlet fever caused 122 deaths—58 males and 64 females. Eleven of these deaths occurred in the winter, 23 in the spring, 35 in the summer, and 53 in the autumnal quarter—a total of 122; being 3.46 per cent. of the total mortality, against 2.48 per cent. for the previous year."‡

In Philadelphia, from 1809 to 1868 inclusive, a period of sixty years, there were 13,016 deaths from scarlatina, according to the table of Meigs & Pepper.|| For the following four years the figures are taken from the reports of the board of health of that city:§

YEAR.	DEATHS.	YEAR.	DEATHS.	YEAR.	DEATHS.
1809.....	3	1831.....	200	1853.....	388
1810.....	2	1832.....	307	1854.....	162
1811.....	3	1833.....	61	1855.....	163
1812.....	1	1834.....	83	1856.....	992
1813.....	0	1835.....	305	1857.....	704
1814.....	0	1836.....	240	1858.....	241
1815.....	0	1837.....	205	1859.....	232
1816.....	0	1838.....	134	1860.....	591
1817.....	0	1839.....	225	1861.....	1,190
1818.....	1	1840.....	244	1862.....	461
1819.....	2	1841.....	83	1863.....	275
1820.....	31	1842.....	220	1864.....	349
1821.....	13	1843.....	395	1865.....	624
1822.....	9	1844.....	269	1866.....	491
1823.....	11	1845.....	199	1867.....	367
1824.....	9	1846.....	221	1868.....	224
1825.....	9	1847.....	344	1869.....	799
1826.....	4	1848.....	172	1870.....	956
1827.....	1	1849.....	242	1871.....	262
1828.....	0	1850.....	440	1872.....	174
1829.....	9	1851.....	391		
1830.....	40	1852.....	434	Total.....	15,207

From the Philadelphia Health Report of 1872, p. 43, et seq., we quote the following:

* American Journal Medical Sciences, 1857, p. 27.

† Cincinnati Lancet and Observer, 1858, p. 651.

‡ Reports Board of Health, City of Pittsburg, 1871-72, also 1873, p. 67. Crosby Gray, Health Officer.

|| Diseases of Children. Meigs & Pepper, Philadelphia, 1870, p. 665.

§ Report of Board of Health, City and Port of Philadelphia, 1873.

Scarlet Fever.—This scourge of childhood has been less fatal than usual the present year. The number of deaths was less by eighty-eight than that reported for 1871. The following table shows the annual mortality from scarlet fever, and its percentages upon the whole number of deaths, from all causes (still-born excluded), from 1861 to 1872 inclusive :

"YEAR.	TOTAL MORTALITY.	DEATHS FROM SCARLET FEVER.	PER CENT. OF DEATHS TO TOTAL MORTALITY.
1861.....	13,838	1,190	8.59
1862.....	14,386	461	3.20
1863.....	15,045	275	1.82
1864.....	16,794	349	2.07
1865.....	16,453	624	3.79
1866.....	16,005	491	3.06
1867.....	13,153	367	2.78
1868.....	13,949	224	1.60
1869.....	13,997	799	5.70
1870.....	15,928	956	6.00
1871.....	16,118	262	1.62
1872.....	19,710	174	0.88
Totals.....	185,376	6,172	3.32 "

The above table shows that the deaths from scarlet fever and the percentage to the total mortality were less in 1872 than in any preceding years. The average percentage of deaths from this disease to the whole number of deaths, for the twelve years included in the foregoing table, was 3.32; for the eleven years preceding 1872, it was 3.62; for 1872, the ratio was but .88 of one per cent.

By examining the bills of mortality as far back as 1807, we find that during the twenty-four years, from 1807 to 1830 inclusive, only 162 deaths were recorded from scarlet fever. For the first six years of this period, namely, from 1807 to 1812, only thirteen deaths were placed upon the record; from the latter year to 1818, not a single death was registered. In 1831, as many as 200 deaths were charged to this disease. From this date up to the present time it has prevailed extensively, and, at periods, with terrible fatality. Whether, during the twenty-four years above alluded to, there was remarkable exemption from this disease, or the deaths from scarlet fever were reported under other terms, as Dr. Emerson suggests, is impossible to state with any degree of certainty. But, supposing the deaths from scarlet fever to have been returned under the title of sore throat, the number was not sufficiently great

to unsettle the opinion of the limited prevalence of this disease during the years referred to.

The following table exhibits the deaths from scarlet fever, and the percentage of deaths to the total mortality, exclusive of still-born, for forty-two years, from 1831 to 1872 inclusive :

YEARS.	TOTAL MORTALITY.	DEATHS FROM SCARLET FEVER.	PER CENT. OF
			DEATHS TO TOTAL MORTALITY.
1831 to 1840.....	49,678	2,004	4.03
1841 to 1850.....	64,191	2,585	4.02
1851 to 1860.....	100,635	4,298	4.27
1861 to 1872.....	185,376	6,172	3.32
Total.....	399,880	15,059	3.76

It will be observed that in the three decennial periods the proportion of deaths to total mortality varied but a few hundredths of one per cent., but in the twelve years, 1861 to 1872, it diminished to a very considerable extent, being much less than the average of the preceding thirty years. Of 15,059 deaths from scarlet fever in the past forty-two years, 7,411, or 49.213 per cent., were males, and 7,648, or 50.787 per cent., were females—an excess of the latter of only 1.574 per cent. A very slight excess of mortality among females will be noted in each of the several periods into which the forty-two years have been divided.

There were 14,341 deaths, or 95.23 per cent., in the first ten years of life, of which 9,867, or 65.49 per cent., were in the four years from one to five. 233, or 1.54 per cent., occurred in ages over twenty years. It will be seen from these results that scarlet fever is pre-eminently a disease of infancy and childhood, and is particularly fatal between the first and fifth year of life.

We now turn to the consideration of Delaware.

DELAWARE.—Total deaths from scarlatina in 1870, 58; males 31, females 27. Of the decedents, 38 were under five years of age. The season of greatest mortality was spring. No month was especially marked as regards mortality. The maximum temperature, the season of greatest mortality, was about 53° Fahr. Average altitude of the State above the level of the sea, 100 feet.

Reflections.—Population, 125,015. Of these, 16,713 were under five years of age; so that out of every 440 of the population under five years of age, one died of scarlatina. The greatest mortality occurred in warm weather. All the decedents except four, were white.

EN RESUME.—The total population of this Middle States section was 8,935,661. The total number of decedents from scarlatina was 9,887. Of these, 5,013 were males, and 4,874 were females. The distribution of deaths by months was as follows:

March.....	1,322	September.....	392
April.....	1,224	October.....	429
May.....	1,152	November.....	588
June.....	607	December.....	837
July.....	559	January.....	1,125
August.....	448	February.....	1,204
		Total.....	9,887

The deaths by seasons would then read as follows: Spring, 3,698; summer, 1,614; autumn, 1,409; winter, 3,166. From this statement it will be seen that more than two-thirds of the deaths occur in winter and in spring, and *in the coldest weather*. All the decedents, with the exception of 84, were whites. The following table will show the seeming effects of altitude on the disease:

STATE.	AVERAGE ALTITUDE.	DEATHS TO AGGREGATE POPULATION.	DEATHS IN POPULA- TION UNDER FIVE YEARS OF AGE.
New York.....	800	1 to 1,288	1 in 227
New Jersey.....	200	1 " 1,161	1 " 235
Pennsylvania.....	750	1 " 624	1 " 128
Delaware.....	100	1 " 2,156	1 " 440

In New Jersey and Delaware—States having an average altitude under 400 feet—one person to about every 1,229 of aggregate population died of scarlatina. In New York and Pennsylvania, having average altitudes above 400 feet, one person to about 874 of the aggregate population died of scarlatina. A study of these figures reveals the fact, that what was true of New England is reversed in the Middle States. The following proposition can then be made:

Altitude in the Middle States seems to increase the tendency to scarlatina.

In the meantime we might observe, *en passant*, that New Jersey is a densely populated State.

We shall now turn to the Southern States.

MARYLAND.—Total deaths from scarlatina in 1870, 331; males 163, females 168. Season of greatest mortality, winter. Of the decedents, 212 were under five years of age. Month of greatest mortality was March. Maximum and minimum temperature, 42°

and 39° Fahr. Average altitude of the State above the level of the sea, 375 feet.

Reflections.—Total population, 780,894. Of these, 108,467 were under five years of age, so that out of every 512 of the population under five years of age, one died of scarlatina. All the decedents were whites, except twenty-four. The weather was cool the month of greatest mortality. Epidemics of scarlatina occur from time to time in the State of Maryland.

Dr. Samuel Tyler describes an early epidemic of scarlatina occurring in Frederick City and Frederick county.* In 1857, there seems to have been an epidemic tendency in this State. Says Dr. A. M. White:† “Scarlet fever has prevailed to a considerable extent the last few years. It is generally first seen in the fall of the year, continuing during the winter and until late in the spring. Very hot weather in the region under consideration (Carroll, Harford, and Baltimore counties) checks its progress.”

Dr. Edmund G. Waters (Ib. p. 85), speaking of the epidemics of Baltimore, remarks: “The scarlet fever has paid us in the winter just past its annual visit.” The number of deaths from scarlatina in Baltimore for the year ending October 31, 1872, were 109; for the year ending October 31, 1873, 116 deaths; for the year ending October 31, 1874, 174 deaths.‡ From this it will be seen that for several years past Baltimore has had a decided scarlatinous tendency developing itself.

VIRGINIA.—Deaths from scarlatina, 43; males 21, females 22. Of the decedents, 28 were under five years of age. No particular season or month seems to present any great mortality. Average altitude of State above the level of the sea is 700 feet.

Reflections.—Population of State in 1870 was 1,225,163. Of this number, 183,469 were under five years of age; so that out of every 6,553 of the population under five years of age, one died of scarlatina. It is very evident that all these cases were sporadic. Of the decedents, 12 were colored. Epidemics of scarlatina have occurred in the State of Virginia at long intervals. Says Dr. H. D. Magill: “In the year 1832 the scarlet fever made its appearance in the northern counties of the valley of Virginia, and extended its ravages across the Blue Ridge Mountains into the contiguous counties

*American Journal Medical Sciences, 1846, p. 539.

†Transactions American Medical Association, Vol. X., 1857, p. 81.

‡Reports Board of Health of Baltimore, 1872-3-4. James A. Stewart, M.D., Health Officer.

of Loudon and Fauquier.”* Dr. Richard A. Sale, of Bedford county, gives an account of an epidemic observed there.† I am indebted to Dr. J. G. Cabell, health officer of Richmond, for the subjoined statement of mortality from scarlatina in that city from 1871 up to October 27, 1874, inclusive :

YEAR.	WHITES.	COLORED.	TOTAL DEATHS.
1871.....	1	0	1
1872.....	1	1	2
1873.....	3	1	4
1874	1	0	1
	<hr/> 6	<hr/> 2	<hr/> 8

Dr. C. states, in his report for 1873,‡ that “ the report of deaths is very favorable, there having been only four; in the year 1872, two deaths; in 1871, one death.”

NORTH CAROLINA.—Total deaths from scarlatina, 14; males 5, females 9. Of these, 8 were under five years of age. No particular season seems to present a marked mortality. In July, with an maximum and minimum temperature of 81° and 78° Fahr., there were five deaths. Average altitude of State above level of the sea, 550 feet.

Reflections.—Population in 1870 was 1,071,361. Of this population 163,271 were under five years of age; so that out of every 20,409 of the population under five years of age, one died of scarlatina. All the decedents were white except three.

Dr. James H. Dickson remarks :|| “ Scarlatina may be said to be one of our regular epidemics. Very few years pass without the occurrence of sporadic cases of this disease, and every three or four years we have it prevailing as an epidemic. No section of the State can now be said to enjoy an exemption from this terrible pestilence. At Wilmington, it first appeared in 1835.” Two other epidemics at Wilmington are mentioned by Dickson, one of which occurred in 1854, the other in 1858. Dr. McKee reports an epidemic of the disease occurring at Raleigh in the year 1855. Dr. Cox reports an epidemic occurring in Perquiman county in 1858. (Ib. p. 305.)

SOUTH CAROLINA.—Deaths from scarlatina, 18; males 11, fe-

*American Journal Medical Sciences, Vol. XXIV., p. 341.

†Medical Examiner, Vol. III., Philadelphia, 1840, p. 42.

‡Report Board of Health of Richmond, Virginia, 1873, p. 26.

||Transactions American Medical Associations, Vol. XIII., 1860.

males 7. Of these, 11 were under five years of age. Winter was the season of greatest mortality. No particular month was remarkable for its mortality. Average altitude of State above the level of the sea, 350 feet.

Reflections.—Population of State in 1870 was 705,606. Of these, 109,322 were under five years of age; so that out of every 9,939 of population under five years of age, one died of scarlatina. The season of greatest mortality was cool. Surprising to state, all the decedents except five, were blacks.

Scarlet fever rarely ever prevails as an epidemic in this State. In 1838 an epidemic of scarlatina broke out at the orphan-house in Charleston. This epidemic has been fully described by Dr. George Logan.*

GEORGIA.—Deaths from scarlatina in 1870, 12; males 4, females 8. Of these, four were under five years of age. Winter was the season of greatest mortality. Average altitude of State above the level of the sea, 575 feet.

Reflections.—Population in 1870 was 1,184,109. Of this number, 189,408 were under five years of age; so that out of every 47,351 of the population under five years of age, one died of scarlatina. All the decedents except five, were whites. The greatest mortality was in the cooler weather. Scarlet fever rarely ever prevails as an epidemic in Georgia.

Dr. F. M. Roberts states: "Scarlatina made its appearance in Augusta about the 20th of December, 1832, and has continued with more or less violence up to the present time (1833)."†

Dr. Briggs, of Troupville, Lowndes county, remarks: "Scarlatina prevailed co-extensive with the limits of the county during the years 1838 and 1839. It has appeared twice since, in 1844 and 1855; but could scarcely be considered an epidemic either of the last two times."‡

To the valuable statistical work of Dr. Duncan, of Savannah, I am indebted for the following figures, regarding scarlatina, in that city, for the period embraced between January 1, 1854, and December 31, 1869:||

*American Journal Medical Sciences, Vol. XXIV., p. 71.

†American Journal Medical Sciences, Vol. XIII., p. 375.

‡Transactions of the American Medical Association, p. 139.

||Tabulated Mortuary Record of the City of Savannah, by W. Duncan, M.D., Savannah, 1870.

YEAR	DEATHS.
1854.....	9
1855.....	13
1856.....	0
1857.....	1
1858.....	2
1859.....	11
1860.....	9
1861.....	17
1862.....	17
1863.....	9
1864.....	0
1865.....	0
1866.....	1
1867.....	0
1868.....	0
1869.....	0
Total.....	—89

The following additional table was kindly furnished me by Dr. Duncan, who states in a letter, that the disease has not prevailed to any great extent in Savannah since the war, which is due, he thinks, "to the climate and well-ventilated condition of residences :"

	DEATHS.
October 1, 1869, to September 30, 1870.....	1
" 1, 1870, " " " 1871.....	5
" 1, 1871, " " " 1872.....	0
Jan'y 1, 1872, to December 31, 1872.....	0
" 1, 1873, " " " 1873.....	5
" 1, 1874, " " " 1874.....	6
Total.....	—17

So that, in a period of twenty-two years, the deaths from scarlatina, in Savannah, have only been 106. The population of the city in 1850 was 15,312; in 1860, 22,292; in 1870, 28,234.

FLORIDA.—Deaths from scarlatina in 1870 were ten; males five, females five. Of these decedents, seven were under five years of age. The season of greatest mortality was winter. The month of greatest mortality was February. The maximum and minimum temperature during the month of greatest mortality was 70° and 56° Fahr. Average altitude of the State above the level of the sea is sixty feet.

Reflections.—Population of State in 1870 was 187,748. Of this number, 30,492 were under five years of age; so that out of every 4,356 of the population under five years of age, one died of scarlatina. The weather was warm the month of greatest mortality. As in South Carolina, the majority of the decedents were blacks—*i. e.*, six colored and four whites. I am inclined to the belief, in the absence of any positive information, that the disease is rarely, if ever, epidemic in Florida.

ALABAMA.—Deaths from scarlatina, thirteen ; males seven, females six. Of these, nine were under five years of age. The season of greatest mortality was spring. The month of greatest mortality was March. The maximum and minimum temperature, month of greatest mortality, was 62° and 58° Fahr. Average altitude of state above the level of the sea is 375 feet.

Reflections.—Population of State in 1870 was 996,992. Of this number, 156,464 were under five years of age ; so that out of every 17,385 of the population under five years of age, one died of scarlatina. All the decedents except four, were white. Epidemics of scarlatina have occurred in the State. Dr. J. Y. Basset, of Huntsville, states : “ In the spring of 1833, we were visited by the scarlet fever in its most malignant form. During the prevalence of this epidemic, more than fifty infants perished in Huntsville.”*

Dr. F. A. Bates, of Dallas county, remarks : “ During my practice in this State, there has been only one epidemic of scarlatina in my neighborhood, and that was in the winter of 1843–44. In its extent it embraced about eighty cases.”†

Dr. John P. Furniss, health officer of Selma, in a communication dated April 4, 1875, states, that “ there has been only one death from scarlatina within the past five years. Population 3,500 whites ; 4,500 blacks.”

MISSISSIPPI.—Total deaths from scarlatina, twenty-four ; males fourteen, females ten. Of the decedents, sixteen were under five years of age. The season of greatest mortality was summer. The month of greatest mortality, June. Maximum and minimum temperature, 80° and 77° Fahr. Average altitude of the State above the level of the sea, 275 feet.

Reflections.—Population in 1870 was 827,922. Of this number, 137,303 were under five years of age ; so that out of every 8,582 of population under five years of age, one died of scarlatina. The weather during the month of greatest mortality was warm. Thirteen, or more than fifty per cent. of the decedents, were colored. I can find no record of any epidemics of scarlatina having prevailed in the State.

LOUISIANA.—Deaths from scarlatina, sixty-eight ; males thirty-eight, females thirty. Of these decedents, forty-four were under five years of age. Spring was the season of greatest mortality. April was the month of greatest mortality. The maximum and

*Fenner's Southern Medical Reports, Vol. I., p. 266.

†Fenner's Southern Medical Reports, New York, 1850, p. 313.

minimum temperature of the month of greatest mortality was 72° and 67° Fahr. The average altitude of the State above the level of the sea is seventy-five feet.

Reflections.—Population of State in 1870 was 726,915. Of this number, 110,572, were under five years of age; so that out of every 2,511 of the population under five years of age, one died of scarlatina. The month of greatest mortality was warm. Twenty-three of the decedents were colored. I have no record of any epidemic in this State. In the meantime the disease seems to occur sporadically at New Orleans. In that city, in 1867, there were twenty-four deaths from scarlatina; 1868, fourteen deaths; in 1869, thirteen deaths; in 1870, forty-four deaths; in 1871, there were five deaths; in 1872, three deaths.* At times an increase in the mortality has been noticed. Thus, in 1850, there were twenty-one deaths; while in 1847–8–9, there were 167 deaths from scarlatina.

Dr. Chaille, of New Orleans, in an article on the vital statistics of that city, remarks: "Scarlet fever, total deaths in thirteen years, 1,038. It prevailed chiefly in 1859–60–61–5–6–70, and especially during the four months, April to July."†

TEXAS.—Deaths from scarlatina, 20; males 9, females 11. Of the decedents, 14 were under five years of age. The season of greatest mortality was spring. The average altitude of the State is 450 feet above the level of the sea.

Reflections.—Population in 1870 was 818,579. Of this number, 134,637 were under five years of age; so that out of every 9,617 of the population under five years of age, one died of scarlatina. The season of greatest mortality was warm. All the decedents except four, were whites. I have no record of any epidemics of scarlatina occurring in Texas. In a letter, dated October 30, 1874, Dr. George W. Peete, health officer of Galveston, sends the following statement:

Mortality of Galveston, Texas.

YEAR.	TOTAL MORTALITY.	DEATHS FROM SCARLATINA.
1871.....	683	6
1872.....	676	4
1873.....	658	4
Total.....	2,017	14

It will be noticed how light the mortality from scarlatina is in

*Report of the New Orleans Board of Health to the General Assembly of Louisiana, 1872–73. Dr. S. C. Russell, Health Officer.

†New Orleans Medical and Surgical Journal, July, 1874, p. 20.

this city, having a population of 34,000. Dr. Peete further says: "But one of these cases is reported as malignant scarlet fever, and one as having died of scarlatinal dropsy. I may remark, that all this class of diseases assume here a very modified form, viz: measles, diphtheria, erysipelas, and scarlet fever. The latter disease, too, manifests here an unusual capriciousness in its attacks—often affecting but one or two individuals of a numerous family."

EN RESUME.—Total population in this Southern section was 8,525,289, of whom 3,713,327 were blacks. The total number of deaths from scarlet fever was 553. This mortality was distributed through the following months of the year:

March.....	60	July.....	30	November.....	34
April.....	61	August	33	December.....	56
May.....	59	September.....	31	January	61
June.....	33	October.....	32	February.....	63
Total.....					553

By seasons, the mortality would then read as follows: Spring, 180; summer, 96; autumn, 97; winter, 180. The month of greatest mortality was February. The seasons of greatest mortality were spring and winter, or in the colder weather. 277 of the decedents were males and 276 females. The seeming influence of altitude on the disease in the South may be studied in the following table:

STATES.	AVERAGE ALTITUDE.	DEATHS TO THE AGGREGATE	DEATHS TO THE POPULATION UNDER
	FEET.	POPULATION.	5 YEARS OF AGE.
Maryland.....	375	1 to 2,360	1 to 512
Virginia	700	1 " 28,493	1 " 6,553
North Carolina.....	550	1 " 76,526	1 " 20,409
South Carolina.....	350	1 " 39,200	1 " 9,939
Georgia	575	1 " 98,676	1 " 47,351
Florida	60	1 " 18,775	1 " 4,356
Alabama	375	1 " 76,692	1 " 17,385
Mississippi	275	1 " 34,497	1 " 8,582
Louisiana.....	75	1 " 10,690	1 " 2,511
Texas	450	1 " 40,929	1 " 9,617

In Texas, Virginia, North Carolina, and Georgia—States having an average altitude of over 400 feet above the level of the sea—one death from scarlatina occurred out of every 48,306 of aggregate population. In the remainder of the Southern States, having an average altitude under 400 feet, one death occurred from scarlatina out of every 9,608 of aggregate population. *In the Southern States altitude seems to diminish the tendency toward scarlatina.*

[TO BE CONTINUED.]

Art. 4.—Is Revaccination Necessary?

By CHAS. P. KING, A.M., M.D.

That the protective influence of primary vaccination is diminished, and, in many instances, entirely lost by the lapse of time, has been shown most positively and clearly by the observations of those who have had opportunities of making investigations concerning this all-important subject. To prove the truth of this assertion, it is only necessary to state that nearly *all* recent writers upon the subject recommend a recourse to revaccination some years after the first operation.

The opinion is pretty generally held by many leading scientific men of the day (and it appears to be well founded), that the extent of protection afforded by cow-pox is very much less in the latter than in the former part of the period which has elapsed since the discovery of vaccination—that is, a larger proportion of those vaccinated have had varioloid of late years than before; hence many have been led to believe that the vaccine virus has deteriorated in consequence of its having been transmitted from one person to another. This belief has suggested the importance of obtaining virus direct from the cow. Although the dangers of humanized lymph are very much exaggerated, still we must admit that, under certain circumstances, the transmission of other diseases from child to child is possible—nay, that the actual occurrence of such transmissions is an acknowledged fact.

Vaccination with virus direct from the cow produces greater local and general effects than belong to vaccina as ordinarily produced from the human virus; but it is not a settled question as yet, that its protective power is any greater. Another explanation why there has been an increase of varioloid among those who have been vaccinated, is that its protective influence diminishes after the lapse of years. This explanation is well founded, for we find that varioloid occurs much oftener in the middle-aged persons, or those advanced in life, than among the young. The importance of vaccination rests upon this fact. Having admitted the importance of vaccination, the question naturally arises, How often should it be resorted to? Says Professor Flint, of New York: "There is no known law governing the duration of the protective influence of a single vaccination. Probably the duration varies

widely in different persons, and some persons are protected for life by one vaccination. Some have thought that revaccination should be practiced as often as every three or four years, and others that an interval of twenty or more years is advisable. It is evidently better that the period should be needlessly short than too long. With our present knowledge, the propriety, if not the importance of revaccination every five years, is to be advocated. In cases of known exposure, or when small-pox is prevailing as an epidemic, it is proper to revaccinate without regard to previous vaccinations. Revaccination, in fact, is always proper, as the readiest and safest test of unsusceptibility to small-pox."

Another reason why varioloid, and also small-pox, is so common among those who suppose themselves to have been protected by having had cow pox, is on account of imperfect or spurious vaccinations. The operation in this country is performed very often by those who make no pretensions to medical skill, and, to a very great extent, by quacks and charlatans; often persons are vaccinated and pay little or no attention to the matter, caring but little as to whether it takes properly or not. Hence, a host of persons are either wholly unprotected, or but partially so. The foregoing causes we think sufficient to account, in a very great measure, for the apparent inadequateness of vaccination as affording immunity from small-pox. These causes are not removable, and if they were, it is not improbable that the expectations which Jenner cherished of exterminating small-pox, would be realized.

With a view of bringing this matter of revaccination fairly before the reader, I will quote the opinions of some of the leading authors of the day. Says Professor Woods: "In considering this subject of vaccination, I would strongly urge the propriety of universal revaccination as the means not only of promoting the comfort, and possibly of saving the lives of individuals, but also of preventing the spread of small-pox, and of ultimately eradicating it, if not from the globe, at least from extensive communities." Says our distinguished American writer, Dr. Condie, of Philadelphia: "If, therefore, the facts upon record are perfectly accurate, and there is no reason for suspecting them to be otherwise, they afford conclusive evidence of the necessity and importance of revaccination in all cases in which persons are liable to be exposed to the infection of small-pox." He says, still further: "We have collected together the result of over nine hundred thousand revaccinations performed by different individuals in Europe, and in this

country. In about thirty-six per cent. of these, revaccinations are stated to have been successful; while in about twenty per cent. of the cases, when a second vaccination was deemed necessary, the operation is reported as having been successful." Says Professor Meigs: "In the year 1845, I revaccinated sixty-three persons, of whom nine had the disease with every appearance of regularity—that is to say, the puncture did not become irritated until the third or fourth day; the vesicle was perfect on the ninth, with the umbilicated center, hard base, scarlet areola, and after that period the inflammation subsided. Of these nine, all but one had characteristic cicatrices of previous vaccinations on the arm. The ninth was doubtful, but the individual insisted that he had been properly vaccinated. Of the remaining fifty-four, the greater majority presented more or less strongly marked signs of the disease."

The Academy of Medicine of Paris, consulted upon this subject some years ago by the government, determined that revaccination was really necessary.

We might quote, in further proof of the necessity of revaccination, from many other leading authorities of the day, but will close with the following: A few years since a prize was offered by the "Academy of Science of Paris," for the most satisfactory essay in reply to certain questions relating to the preservative power of vaccination, the necessity of renewing the vaccine virus from the cow, and the necessity of revaccination. The various essays sent in by the competitors for the prize, were referred to a committee of the academy, whose report, submitted in February, 1845, concludes with the following general summary derived from the facts presented by the authors of the essays: *First.* The preservative power of vaccination is absolute for the majority, and temporary for a smaller number; even in the latter, it is absolute until adolescence. *Second.* Small-pox rarely attacks those who have been vaccinated in infancy, before the age of ten or twelve years; from which age, however, until thirty or thirty-five, the vaccinated are particularly liable to small-pox. *Third.* In addition to its protective power, vaccination so modifies the animal economy, that should ever a subsequent attack of small-pox occur, its symptoms will be rendered milder, and its duration curtailed, and its danger considerably diminished. *Fourth.* Vaccine-matter taken directly from the cow, causes local symptoms of greater intensity, while its effects are also more certain, than those of old vaccine-matter; but after being transmitted through the human system for a few weeks, the

local intensity disappears. *Fifth.* Revaccination is the only known method of distinguishing those of the vaccinated who remain protected, from those who do not. *Sixth.* Successful revaccination is not a certain proof that the person in whom it succeeds was liable to contract small-pox. It merely establishes a strong presumption that they were more or less liable. *Seventh.* As a general rule, revaccination should be practiced after the first fourteen years, but sooner, during the prevalence of an epidemic of small-pox.

From extended and close observations, the following deductions are warranted: *First.* Infantile vaccination is an almost perfect safeguard until the fourteenth year. *Second.* At the beginning of the fourteenth year, the system gradually loses its capability of resistance, until about twenty-one, when many persons become almost as liable to small-pox as if they had not been vaccinated. *Third.* This liability remains in full force until about forty-two, when the susceptibility begins to decline, and continues for seven years to grow less and less, becoming extinct at about fifty or sixty, the period of life when the general revolution of the body begins to take place; during which the system yields to decay, or takes a new lease of life for two or three terms of seven years each. *Fourth.* The great practical use to be made of these statements is: Let every youth be revaccinated on entering fourteen. Let several attempts be made, so as to be certain of safety. As the malady is more liable to prevail in cities in winter, especial attention should be given to the subject at that time.

Revaccination is now advocated and practiced everywhere, except among those in whom ignorance and prejudice exclude the light of reason and philanthropy.

Art. 5.—Injury to the Head, with supposed Fracture at the Base of the Skull.

By C. S. MUSCROFT, M.D., Surgeon to the Cincinnati Hospital and Surgeon to St. Mary's Hospital.

The surgeon is not called upon to treat any class of injuries that requires more care and intelligent attention than those occurring to the head, or any that possess greater interest. Such injuries may be followed by the most serious complications, especially where fracture has caused fragments of bone to compress or wound the

brain, or resulting in concussion or laceration of the brain, or blood-vessels within the cranium, by the violence that produces the fracture.

Alexander Love, a railroad brakeman, an American by birth, aged twenty years, unmarried, apparently of good health and habits, was admitted into the Cincinnati Hospital on the second day of May, 1873, and placed in my charge. I saw him at eleven o'clock A. M. The following was his condition:

He had slight bleeding from the nose, and frequent vomiting of large quantities of water mixed with grumous blood; the pupils of both eyes were very much dilated, the right one only responding to the stimulus of light to a very slight extent; there was almost complete immobility of the left orbit, with paralysis of the lid; vision was very indistinct at any considerable distance in both eyes, but he could recognize objects, when brought close to him, with the right eye—with the left he could distinguish the light only. His mind was in a very confused condition, and he was irritable, although he would answer questions with some accuracy. He was very restless, and complained of great thirst, saying that he had not taken a good drink of water for eight months, and called upon an imaginary person to bring him a bucket full. After drinking, he would vomit almost immediately. His pulse beat eighty-five strokes to the minute; the respirations were twenty-eight, and the temperature of the body in the axilla was ninety-eight and one-fourth by the Fahrenheit scale.

No injury could be found on the head until the hair had been cut close off, when a bruised condition of the scalp was seen over the lower and front part of the left parietal or greater wing of the sphenoid bone, which was somewhat depressed. An incision was made through the scalp down to the bone, to examine the full extent of injury, when but a slight depression, with fissure of the external table, was found, which required no treatment. He had no retention of urine, and his bowels were easily moved by cathartics.

The observations in this case were very accurate, and the symptoms carefully noted.

At two o'clock P. M. he was still vomiting; had passed urine without difficulty; pulse ninety-five; respirations twenty-six; heat ninety-nine; complains of great thirst.

At three o'clock the pulse had increased to one hundred and twenty; respirations thirty-two; other symptoms about the same.

Eight o'clock P. M.—Pulse one hundred and twenty-four; respirations thirty-six, and temperature ninety-eight and a half.

May third, eight o'clock A. M.—Patient vomited once during the night, slept but little, and was not able to recognize his mother, who was with him until this morning; pulse one hundred, not strong; heat ninety-nine and three-quarters; respirations twenty-four. His own statement as to the injury received was, that while engaged, on the first day of the month, in the afternoon, in coupling two cars, one a box car and the other an open one laden with lumber, which consisted principally of boards, which had a long piece of timber about eight inches square laying on the top, and the end of which extended beyond them, and that his head was caught between the projecting end of the piece of timber and the box car, he thinking there was space enough between the end of the timber and the car to avoid being caught. In this he was mistaken, and so received the injury to the head. He said he was quite unconscious for a long time after being hurt, but does not know for what period. His statement of the account of the accident was corroborated by his brother, who was present, but said he thought that the injury sustained was of the chest and not the head.

Six o'clock P. M.—Patient complains of severe pain in the head, but is not so restless; thirst still continues; pulse sixty-four; respirations twenty-eight; heat one hundred and one. Ordered rochelle salts, one drachm every three hours until bowels are freely moved.

May fourth, eight o'clock A. M.—Pulse sixty; heat one hundred; respirations twenty. The bowels had moved four times during the night; complains of pain in the head and thirst; has had, since admission, corn-meal gruel for diet, for which, to-day, he has some relish; wishes to sit up in bed, and for the first time, can read the signs on the opposite side of the street. The pupil of right eye has improved. There is now slight ecchymosis of orbital conjunctiva and swelling of left upper eyelid; the pupil of left eye still very much dilated.

Five o'clock P. M.—Pulse fifty-six; respirations twenty-four; heat one hundred and two; face somewhat swollen on left side.

May fifth, eight o'clock A. M.—Is feeling better, and rested better; does not complain of thirst; pulse eighty-five; respirations twenty; heat one hundred and one and three-fourths.

Evening.—Pulse sixty-two; respirations twenty-four; heat one hundred and two.

May sixth, morning.—Rested well last night, and is more rational; pulse sixty-two; respirations nineteen; heat one hundred and one and a half.

Five o'clock p. m.—Swelling of face subsiding; pulse fifty-five; respirations seventeen; heat one hundred and a half.

During the whole of patient's illness, his mind has always been wandering, unless when questions were put to him, which were generally answered correctly.

May seventh, morning.—Improving; has but little appetite; still has headache; pulse forty-eight; respirations seventeen; heat one hundred.

Evening.—Pulse forty-six; respirations fifteen; heat ninety-one and a half.

May eighth, a. m.—Condition about as yesterday; pulse fifty-one; respirations sixteen; heat ninety-nine.

Evening.—Pulse forty-nine; respirations fourteen; heat one hundred.

May ninth, morning.—Pulse forty-seven; respirations eighteen; heat ninety-nine and three-fourths.

Evening.—About as yesterday at same time.

May tenth.—Pulse forty-four; heat ninety-nine and one-fourth.

May eleventh.—Pulse forty-eight; heat as yesterday.

May twelfth.—Pulse fifty-four; heat one hundred.

May thirteenth.—Rested well last night; appetite good.

Notes were taken regularly until the twentieth of May, during which time there was constant but slow improvement, in every respect except the condition of the left eye, the pupil still remaining dilated almost to its fullest extent, with great impairment of vision. There was still almost complete paralysis of the lid and immobility of the orbit.

At the time the pulse was so slow (that is, from the second of May until the twelfth), whenever he moved in bed, or raised to the sitting posture, it would at once increase in frequency, and occasionally the heart's action doubled its number of beats. From the last date until the thirty-first day of May he continued in good condition, at which time he insisted on being discharged from the hospital, as he regarded himself quite well, although the immobile orbit and paralyzed lid remained.

The great point of interest in this case is, what was the exact lesion produced at the time of the injury? I was led to the conclusion, by the symptoms present, that there was fracture at the

base of the skull, either in the anterior fossa, or the junction of the anterior and middle fossa. Now, what is the evidence to sustain this view? The first effect upon the brain was that of severe concussion, which produced entire insensibility, lasting for a period of some hours. This symptom, although not constantly present, is a frequent result of all severe injuries to the head, whether there be fracture or not, but has most certainly been present in the majority of cases of fracture of the skull seen by myself. Second, there was the vomiting of blood and bleeding from the nose during the first forty hours after the injury. Third, the dilatation of both pupils, with obscurity of vision, and, in addition to this, the almost entire immobility of the left orbit and paralysis of the upper lid of the left eye. Also, in addition to these symptoms, there was the very great disturbance of the circulation for more than a week. To cause these effects, we have an immense crushing power applied simultaneously to both sides of the head from broad surfaces, acting as a vise, but producing only a slight abrasion of the scalp, and little apparent injury to the external table of the lower anterior angle of the parietal, or perhaps of the great wing of the sphenoid bone of the left side; and, again, there was the ecchymosis under the left orbital conjunctiva.

The appearance of the scalp in severe injuries of the head is sometimes very deceptive, for where there may be no wound at all externally, all the bones of the skull and some of those of the face may be broken by a hard blow with a heavy, blunt instrument. A case of this kind occurred under my observation, in which all the bones of the skull were broken, the brain mashed into a pulp, and the bones at the base completely comminuted.

Although the statement made by the brother of this young man, "that he had received an injury to the chest," during the whole of the treatment nothing occurred which sustained the correctness of the statement.

Prescott Hewett, surgeon to St. George's Hospital, in his contributions to Holmes' System of Surgery, says the only symptoms that can be depended upon, as indicative of fractured base of the skull, are connected either with an escape of some of the contents of the skull, or with an injury done to the nerves, as they are emerging from the skull. The contents of the skull which may escape in a fracture of the base, are blood, watery fluid, or brain substance. He thus speaks of the escape of blood:

"And now, in order that this escape of blood may take place,

the line of fracture must run in certain given directions; it must in its course involve some of the large vascular channels lying at the base, and it must, moreover, open a road through which the blood can get out of the skull into some part where its escape may be visible. But should it so happen that the injury does not produce effects such as these, there may be a very extensive fracture of the base, the existence of which can not be revealed until the post-mortem examination takes place.

"A fracture at the base may manifest itself by an escape of blood into the cellular tissue of the orbit and eyelids; by bleeding at the nose, or subsequent vomiting of blood; by bleeding from the ears; by an escape of blood into the cellular tissue in the mastoid region, or that of the back of the head."

Many more of the symptoms pertaining to fractures at the base of the skull are related by this most excellent author, but the above quotation seems to exactly suit my case.

In that of Love, I think we clearly have strong reason to believe the blood vomited was the result of rupture of some of the vessels at the base of the brain. It is true the evidence of bleeding did not continue as long as it might, yet quite long enough to establish the fact. And, in addition to this, there was the effusion of blood into the cellular tissue of the orbital conjunctiva, and also there was swelling of the lids and left side of the face.

Now, that bleeding from the nose or ears do not always accompany severe fractures at the base of the skull and continue a long time, was verified in the case of another patient named Croker, who died in the same ward the day that Love was received into the hospital, from the effect of a very severe injury to the vault of the cranium, extending by direct force to the base of the skull, and fracturing it in the anterior, middle, and posterior fossa, from side to side. In addition to this, the nose was broken at the junction of the superior articulation of the nasal bone with the frontal, and this was the cause of hemorrhage, continuing a period of not more than two days. There had also been some bleeding from the ear, which did not last so long. In the case already alluded to, of the extensive fracture with comminution of the bones at the base of the skull, there was no hemorrhage at all.

In addition to the effect produced on the vessels within the cranium, we must not overlook the change wrought upon some of the nerves. There is but little doubt that the optic nerve of the left eye had received an injury, the effect of which was to produce

the permanent dilatation of the pupil and dimness of vision, and in the beginning, dimness of vision of both eyes. Then, undoubtedly, the third nerve was also injured, producing the immobility of the orbit. And last, the fourth and sixth nerves were also injured, which produced the paralysis of the eyelids and muscles of the eye.

Another interesting question is (admitting that there was fracture at the base of the skull in this case), was the fracture produced by direct or indirect violence to the base? I hold to the former opinion. It has been shown that the observation and experiments of Aran upon this subject have clearly pointed out that fracture at the base of the skull from *contre coup*, or indirect violence, is not as frequent as was formerly supposed, and that he combats wholly the ancient and still-prevailing opinion of fractures of the cranium by what are called *contre coups*—i. e., when the base, for example, is fractured by a blow upon an opposite and distant part. Hewett says: "The central bones of the base may be the only bones broken when the front and back part of the head have been caught between two opposing forces." I do not, for my own part, see why a similar condition to the base can not be produced by the two opposing forces being applied to the right and left side of the head, as was evidently the case with Love.

It is very seldom justifiable to resort to operative interference in cases of fracture to the base of the skull, even when the case is well defined; yet the trephine has been applied successfully to the base, and very near the foramen magnum.

Hewett again asks: "What occurs about the broken bones, when the patient survives a fractured base? Does union take place? And if so, by what medium are the broken bones united?"

"In some cases, even after a lengthened period—months and years—no traces of union has been found. In other cases, the line of fracture has been found united partly by dense fibrous tissue, and partly by a thin layer of inlaid bone; and in other cases again, bony union has been perfect, and throughout the whole line of fracture. In some cases of bony union, porous bone has been found heaped up along the sides of the line of fracture on the under side of the skull; and when the fracture passes through one of the sinuses, this heaping up of bone may be such that the channel becomes blocked up."

When the patient Love was first received into the hospital, a most careful examination was instituted to ascertain as far as possible the full extent of injury received, and none could be found

except that connected with the head. And here there was no external appearance other than the bleeding from the nose, the dilated pupils, and the paralyzed condition of the lids and orbit of left eye; yet his mind was in such a condition of vacancy or hebetude, as to lead to the suspicion of further injury to the brain, and this was further indicated by the frequent vomiting of fluids, recently drank, mixed with grumous blood. To be more certain of the appearance of the scalp, the hair was closely cut off, and this revealed the injury on the left side of the head, which was still more thoroughly explored by making an incision through the scalp to the bone, where a slight depression with fissure was found. There being no decided symptoms of compression of the brain, such as to call for operative interference, no more than the exploring incision was made.

As a matter of precaution, in all cases where serious traumatic injury to the head of any kind is suspected, the hair should always be cut closely off, or the scalp shaved. Several cases of extensive fracture to the skull which I have seen, both in my own patients and in that of others, would have been overlooked, had it not been for the precaution mentioned. This procedure, in any event, can do no harm, but, on the contrary, prepares the patient for any operation that may be required, and makes applications and dressings more effective when necessary to use them.

The plan of treatment adopted in the case of Love was mildly depletive from the beginning to the termination of his illness. His bowels were kept open by the use of rochelle salts; the head kept cool with applications of water; corn-meal gruel for diet, and absolute rest.

Art. 6.—Aconite Poisoning.

By THOMAS WADDEL, M. D., Toledo, O. A paper read before the "Toledo Medical Association," April 16, 1875.

Mr. J. R., age 34, married, had been under treatment for nine days for an intermittent neuralgia of the supraorbital nerve and its branches, the pain coming on at eight A. M., and lasting until evening, then subsiding completely until next day.

Before the attack, he had been in his usual health, which was sufficiently good to enable him to pursue his occupation as a carpenter.

For the neuralgia he at first took quinia during the intermissions, with iodide and bromide of pot., besides opii during the paroxysm, the locality of the affected nerve being painted with tinct. iodine. On the third day, as the pain again recurred, the quinia was pushed to quinineism; and on the fourth, he was free from pain. On the following day he had a slight paroxysm. The quinia having been suspended, it was again resumed in quantities of twenty grains during the intermission, and tinct. aconite root applied to affected part with a wet rag, giving marked relief.

On the sixth and seventh day, paroxysm of pain again recurred, lasting about the usual time, not differing materially from the previous ones, except in being much less acute. His pulse during this time ranged from 70 to 80; very regular and full; during the pain it would become more frequent and harder, subsiding and becoming softer after the attack.

On the evening of the seventh day, Dr. Bond saw the patient in consultation, and expressed the opinion that the cure would be somewhat protracted, yet certain. The treatment was then changed to Fowler's sol. gtt. viij., three times daily, after meals, with a bitter tonic before meals of tinct. columbo, tinct. lupulin āā z iv M., et signa; "one-third teaspoonful, in water, before meals." No narcotics given.

The neuralgia again recurred on the following day, but was not severe. Tinct. aconite, locally applied, gave relief.

March 16th. About the usual time pain again came up; tinct. aconite used for a short time, but not giving immediate relief, Raspeil's liniment was substituted. At 4 o'clock P. M., found him sitting up in bed; had been sleeping a little; pulse 70, and regular; in answer to inquiry as to pain, he replied that he was "perfectly easy." I was about leaving the room, when he called me back and asked regarding a visit I had that day from his father. After some further conversation, I left, enjoining quiet, and promising to call again that evening.

At about fifteen minutes to eight P. M., was called in great haste to see my patient, the messenger not appearing to know the cause. The wife met me on the stairs, and with great agitation, informed me she believed she had, by mistake, given him one-third teaspoonful of the tinct. aconite root, instead of the bitters, about twenty minutes to half an hour before, and that he had since eaten a light supper; the patient himself calling her attention to the mistake by

referring to the numbness of lips, tongue, and throat, a few minutes before.

Found him sitting up in bed, considerably excited, but very rational; said his feet were prickling and numb, as well as throat, which had lost all feeling; pulse about 80, considerably weaker than normal; profuse sweating; disturbed respiration; complaining of nausea. Without any delay, and while listening to this recital of the circumstances, an ipecac emetic was given, followed by free draughts of warm water, after which I went for a syringe and catheter, as a substitute for a stomach-pump. In about seven minutes I returned;* found him quietly reclining in bed, awake, and not having vomited. A catheter was passed into the esophagus, when free vomiting took place. Warm water was again given, which was quickly followed by vomiting. This was repeated the third time. The food he had eaten was ejected with the vomited matter. The time consumed until the third act of vomiting, was about twenty minutes after my first seeing him. At this time his pulse became very weak, and he complained of numbness over his entire body; became delirious, and said he was dying; was very restless, jerking and jumping about; was with difficulty kept upon the bed. His symptoms were so alarming, and believing the stomach to be cleared, I now gave him, at short intervals, four wine glassfuls of whisky, which he swallowed with a little difficulty, assisting me to raise the glass to his lips with the back of his hand, as if his fingers were paralyzed. In about twenty minutes after this, his pulse became almost normal, except stronger and fuller. The apparent anxiety and restlessness ceased to some extent, although still delirious, with symptoms of alcoholic stimulation, sitting up in the bed singing English ditties loudly. Pulse 70, full and strong; skin moist; respiration disturbed and shallow. This was the condition at nine P. M., about one and a half hours after taking the aconite. I now left him for a short time (as his symptoms were very much improved) to respond to an urgent call. Returning about fifteen minutes to ten, found him lying on the

* When I returned, the wife expressed to me her doubts of having given the aconite; the husband assuring her, however, that she gave him the medicine from the only bottle (aconite) on the stand, within two feet of his head, while that on the bureau, separated by the width of the room, should have been given. She thereupon bethought of the wine-glass in which the medicine had been mixed with water, and out of which he had drank it. A few drops still remaining, taken on my tongue, produced numbness in a few minutes.

back side of bed, very quiet, the nurse remarking that he thought his pulse better. On examination, found it about 50, strong and full; but was surprised to find it intermitting one of every four beats. On looking for the cause of this change, I immediately glanced at the respiration, and found scarcely any perceptible. The head was thrown back; mouth open; frothy mucous on the lips; head cool; eyelids closed; the whole surface covered by profuse sweat. On inquiry, I learned that he had been fully conscious until ten minutes before my arrival, talking with the nurse, a near relative, in a rational manner regarding the accident, and expressing the conviction that he would not survive it; this last he spoke just before losing consciousness, and since then was unable to swallow. During my absence he took more stimulants; as nearly as could be ascertained, the amount was less than four ounces. Since being unconscious, there has been involuntary evacuations from the bowels, reflex attempts at vomiting.

While I was rapidly examining these symptoms, he gave a short gasp and ceased to breathe. The lips and face became livid, the pulse remaining the same. The patient was rolled over on the side, and artificial respiration (by compression of the chest) was made. After a minute he gasped, and under this stimulus resumed a weak spasmodic respiration, which would cease, if left to itself, for half a minute at a time. At ten and a half o'clock the pulse became very weak and intermittent. Whisky enemata were now given, while an assistant sustained the respiration. The sphincters were so relaxed that continuous pressure over the anus only succeeded in retaining a small portion of the stimulants, yet sufficient to materially strengthen the pulse.

This condition of things continued until eleven o'clock, P. M., when Dr. Thom saw the patient in counsel. So unceasing was the vigilance required to keep the patient from dying up to this time, that no accurate record could be kept of the pulse, respirations, or condition of the pupils. The latter were, however, noticed to be enormously dilated.

His pulse, at this time, counted 80 and full, with a strong tendency to intermit. Surface moist, hands cold, respirations the same as for the past hour, only sustained artificially. After the arrival of Dr. Thom the patient was moved to the front side of the bed; while doing this, although taking less than a minute, the respirations again ceased, and it was only by the greatest exertion that it was resumed. During this suspension of respiration, he

presented all the characteristics of a dead man. Fl. ext. nux vomica m. xv, and digitalis m. xxx, were given hypodermically during the next half hour; after which there was considerable improvement in the pulse and respirations. Whisky was also injected subcutaneously. At twelve o'clock it seemed for the first time safe to leave the respiration to itself, being still spasmodic, and superficial at 40 per minute. Pulse 75 and pretty regular; skin moist, head cool, pupils still much dilated and nonsensitive. During the past two hours he has had several involuntary evacuations from the bowels. From twelve to two o'clock, little change in pulse or respiration, both somewhat more frequent. Carb. ammonia enema given, but little retained. Skin more dry, pupils not so largely dilated, and left recovering sensibility. Inability to swallow still continues. Not the slightest muscular movement has been perceptible since ten o'clock.

At this time Dr. Thom left, expressing the opinion which was coincided in by myself, that his condition would improve as the nervous centers recovered their sensibility from the paralyzing effects of the aconite. The following are the notes for the next few hours:

Two and a half, A. M. Respirations 40, shallow and jerky, mucous rales; pulse 88, very full and regular: left pupil more sensitive and nearly normal, right largely dilated and immovable; more involuntary evacuations; no muscular movement.

Four, A. M. Pulse 90, not strong but regular; respirations 42, regular; left pupil readily responds to light, right much less sensitive; hiccup, involuntary evacuations.

Five, A. M. Pulse and respirations faster, left pupil normal in size, right nearly so, skin dry.

Six, A. M. Pulse 108 stronger and harder; respirations 36, prettily regular; no moist rales; pupils the same.

Seven, A. M. Pulse 110; respirations 48 and jerky; both pupils alike and normal in size for the first time, responding slightly to light.

Seven and a half, A. M. Pulse same, but very weak; respirations 50, injection of fl. ext. digitalis m. xx, subcutaneously; and carb-ammonia, given about this time, improved its character. About eight, A. M., left the patient, being absent about an hour; returned and found the pulse scarcely perceptible at the wrist. Respirations were frequent; skin covered by a clammy sweat. Digitalis was again injected in m. xx, and a catheter passed into

esophagus, through which carb. ammonia, whisky, and water were slowly passed in with a syringe. It was all retained and excited no reflex action except a slight movement of the corners of the mouth. In about twenty minutes a slight improvement could be noticed in the condition of pulse and respiration; still it was evident that a fatal issue could not long be averted. The pupils were now partly exposed; the eyeballs could be touched without exciting any reflex action; the whole surface becoming more cyanotic.

At ten o'clock, Dr. Thom again saw the patient, and expressed surprise at the change in the patient's condition, concurring with us in the now hopeless prognosis. Still carb. ammonia, whisky, and milk were injected through the tube into the esophagus every fifteen minutes, while digitalis and nux vomica were given by the anus, but with little result beyond delaying the fatal issue, which took place at twenty minutes to two o'clock, p. m., the respirations continuing pretty regular until within a few minutes before death. No pulse perceptible at the wrist since twelve o'clock.

Several times between the injections into stomach, "coffee ground" fluid poured from the tubing depending from the mouth, staining the bedding and carpet a deep brown, evidently thrown up by reflex action of the stomach.

Body exhumed and post mortem examination seven days after death. Doctors present: Sturgeon, Ridenour, Thom, Callemore, Forbes, Bigelow, and Waddel.

Little external appearance of decomposition. On removing the skull-cap, the meningeal vessels were found much engorged. This condition extended over the entire investing membranes, being more marked over the posterior depending portion.

A transverse section showed the gray and white portions well defined and normal in color, puncta vasculosa appearing in the latter; all the ventricles were devoid of fluid, and the several structures surrounding them clearly defined. The structure of the cerebellum presented similar appearances to the cerebrum, excepting the post-mortem changes were more marked from the blood gravitating to it from the dorsal position of the head. The cranial nerves, including the fifth pair, were, so far as observed, perfectly normal. The entire structure showed absence of organic change, save that necessarily following death.

The stomach, the only part of the digestive tube examined, was found to contain about two ounces of gray colored thick liquid; after removing which the mucous membrane had a yellowish

tinge, which mostly disappeared on washing. This membrane showed evidence of post-mortem changes, the pressure of the finger readily sliding it from off the subjacent muscular structure, which showed white.

The liver was somewhat larger than normal, surrounded by a dark colored border three-fourths of an inch in width.

Heart normal in size and structure. Lungs: left was bound by pleuritic adhesions which *were very firm and resisting*. No adhesions on the right side; both lungs showed black over their entire structure; were quite friable; no indurations, either circumscribed or diffuse, or evidence of tubercles could be discovered by careful examination. All portions thrown in water were very buoyant.

No other structures examined.

REMARKS.—This case is of interest, aside from its features as a case of poisoning. As an example of the unpleasantness which sometimes follows the most faithful performance of the duties of a physician.

After the death of this man, the proper officer of the law was informed of the facts, from myself and also the wife, concurring with me in writing a certificate of death from "accidental poisoning," which was very distasteful to the wife.

Three days after the death and burial, being indisposed, she called in an *irregular* practitioner, to whom she purported to relate the facts relating to the death of her husband; whereupon, he comforted her with the assurance that he did not die from poisoning from aconite, but from some other cause, most probably disease of the brain, of which the neuralgia was a symptom.

He strongly urged a post-mortem examination, assuring her that those other causes of death would thus be revealed, and comfort to her mind would follow.

He made the examination, as above stated, at the conclusion of which this practitioner stated to us his opinion that the only cause of death which he could entertain aside from aconite, was the possibility of congestive chill. But on the day following, he informed the wife that the immediate cause of death was disease of the lungs, which he said were almost entirely gone. Also, *that no evidence of poisoning by aconite was discovered in the stomach or body, consequently it had not been given.*

This comforting assurance soon produced its legitimate sequel in the demand on the part of the widow for a change of the certificate

of death, which demand was accompanied by a threat of prosecution, in case I failed to comply. It is probably unnecessary to state that, as there was no reason for doing so, the certificate was not changed.

After this the friends (?) now attempted (three weeks after death) to supplant the obnoxious certificate (on which the burial permit was granted, and which had been by this time concealed) by one from this practitioner (who *had not seen the patient* during his illness), in which the cause of death was given, "enervation," but this not being accepted, he wrote another, saying the cause of death was "nervous debility," but all these subterfuges were vain, for the authorities compelled the production of the proper certificate.

The quantity of aconite taken in this case, one-third of a teaspoonful of the tincture of the root* is of course very indefinite; but it is presumably certain that not less than forty, and probably sixty, drops were taken.

Regarding the fatal dose, on referring to authorities, Wormley says:

"The quantity necessary to cause death differs widely, since the preparations of aconite are subject to great variations in strength. Thus, Dr. Fleming mentions an instance where two grains of alcoholic extract occasioned alarming symptoms, and another where four grains proved fatal, whilst Dr. Christison relates an instance where he gave four grains of carefully prepared extract, without being able to discover any effect whatever.

"In a case reported by Dr. Easton, twenty-five minims of a tinct. of the root of aconite, with twenty minims of tinct. of belladonna, caused the death of a healthy young man within three hours; and in another instance, twenty-five drops of the tincture prescribed through ignorance, proved fatal to a man in about four hours.

"Several instances are reported where a drachm of the tinct. destroyed life.

"Dr. *Pereira* says, two doses of six drops each of the tincture taken at intervals of two hours by a young man aged twenty-one years, produced most alarming symptoms.

"We are acquainted with an instance where a very intelligent physician administered to his wife a dose of five drops of Thayer's

* The tincture used in this case was made with Squibb's percolator, from carefully prepared root. It was obtained from the druggist by a messenger without prescription; was properly labeled "poison," etc.

Ext. of the root of aconite. In from ten to fifteen minutes after, she experienced a burning sensation in the throat, and great numbness of the arms. These effects were soon followed by tingling in the surface of the whole body, difficulty of breathing, impending suffocation, dimness of vision, and alarming prostration, which continued for about two hours. She then rapidly recovered." (Micro-Chemistry of Poisons, page 611.)

Post-mortem appearances.—"The most common morbid appearances in death from aconite are an injected condition of the blood-vessels of the brain and its membranes, and congestion of the lungs and liver, with more or less redness of the mucous membrane of the stomach and intestines. The blood throughout the body is generally fluid, and of a dark color. Three persons died from each, taking a glass of brandy in which aconite root was macerated. The following appearances were observed: the esophagus, stomach, and intestines were found much inflamed, and the blood-vessels, especially the veins of the digestive tube, much injected; the cavity of the peritoneum contained a large amount of yellowish serum; the lungs were dense, of a bluish or violet hue, slightly crepitant, and gorged with blood; the brain was healthy, but its blood-vessels somewhat injected." (Wormley, page 614.)

Although the determining of aconite poisoning must rest mainly on the symptoms or clinical history of the case, yet, on comparing the appearances in this case with those *most commonly* observed after death from aconite, it might be confidently stated that few, if any, were in reality absent. On referring to the condition of the brain, we find meningeal congestion most marked without any evidence of effusion. The puncta vasculosa were also marked, appearing like circumscribed black spots throughout the white structure of the hemispheres, all pointing to the congestion, being of recent origin.

The lung substance showed nothing abnormal, such as tubercles, cavities, or induration. Their condition might be well described in the language quoted above, "bluish black, slightly crepitant, and gorged with blood." The density of the pleuritic adhesions precluded the possibility of recent origin.

The coffee-ground fluid which poured in such quantities from the esophagus tube during the last few hours of life, and which could be observed to be ejected coincident with reflex action of the stomach, pointed strongly to the existence of congestion at that time.

On referring to authorities, we find that the determining with certainty, the existence of inflammation of the stomach immediately before death, by post-mortem examination, presents considerable difficulty. As its most common gross appearances, viz: redness and injection are found in cases where no previous disease of this organ existed, and while in other cases in which death was caused by the direct action of an instant poison, no post-mortem appearances of inflammation could be observed. In any case, "these appearances are distinct for a short time only after death, being most marked on the first day, and soon after, but at irregular periods, becoming more obscure." (Beck, vol. ix, p. 450).

This same authority adds that the existence of inflammation of the stomach must be proved by the symptoms during life.

The peculiar operation of large doses of aconite upon the respiratory center, as proved by the experiments of Böhm, Wartman, and others, was very manifest in this case.* These investigators having developed the fact of its producing, when taken internally in sufficient doses, the same condition of the centers governing respiration, as it does in the peripheral nerves when applied to the skin—viz, complete paralysis, a condition which, obtaining in those vital structures, is soon followed by complete suspension of the respiration.

The intermittent character of the pulse—another characteristic of its toxic effects, was also prominently manifest; and this, notwithstanding its force, was materially increased by the action of the alcohol, both of these conditions obtaining within two hours after the aconite was taken.

Art. 7.—A Case of Cholera Infantum with Treatment.

By C. L. GREGORY, M. D., Montezuma, Ohio.

The report of a case of cholera infantum of July, last, may not be without interest at this season. The treatment might possibly be of benefit also. A —, male, aet. 18 months, fair complexion, robust, was attacked suddenly with copious alvine discharges, which quickly became purely serous, scarcely staining the linen. I arrived in three hours from first discharge and found patient

* Treatise on Therapeutics, etc., by H. C. Wood, M.D., page 153.

slightly restless; pallid surface; skin cool and moist; pallor of lips and mucous membranes prominent; eyes sunken and pupils dilated; emaciation marked; no abdominal tenderness or heat; intense thirst; axillary temperature, 97°; pulse 110, soft and feeble; nausea and slight emesis; dejections almost continuous and nearly odorless; no urine passed; prostration great.

Treatment.—Gave *M. v. tr. cantharides* at intervals of ten minutes, and ordered the following:

R Tinct. Nucis Vomicae, *M. c.*

“ Opii, *M. xxx.*

Ext. Belladonnæ Fl., *M. xl.*

Spir. Aether. Nitr., *M. ccxxx. M**

I administered four drops every thirty minutes, till the vomiting and dejections were checked, then every one, two, three, or four hours, as seemed to be indicated by the subsidence of the symptoms.

I gave four doses *tr. canthar.* as directed above. Five doses of the second prescription were given at intervals of thirty minutes, when the time was extended as directed. These were the doses retained; others were thrown up. When a dose was vomited immediately, it was repeated at once. The irritability of stomach with vomiting, was a serious obstacle to treatment. As after treatment I ordered an easily-digested and nourishing diet, with the following:

R Sol. potass. arsenit.,

Tinct. nucis vom., *āā M. c.*

Spir. aether. nitr., *M. cc. M†*

Dose.—Six drops four times per day. Case dismissed.

Less than a week after discharging this case, I was informed that the restorative medicine had caused an extensive “breaking out” to appear on the child’s person, for which I was requested to prescribe. Without seeing the case I ordered the medicine discontin-

* A sol. strychnia—gr. i to the ℥, *M lx*—may be substituted for the *tr. nucis vomicae*; yet I prefer the latter, notwithstanding the known fact of its uncertain action, and the fixed positiveness of the former. I test my *tr. nucis vom.* on my own person until I am convinced of its value or worthlessness. If of suitable strength, I use it; if not, I throw it away. In testing it I commence with a small dose at certain intervals, gradually increasing it till I am satisfied.

† This formula is written as used then. I now either supersede the *spts. nitr.* by a more active diuretic or add it to the formula.

I also add *opii* in small doses when convalescence is retarded by a diarrhœa

ued, the child dressed coolly, thoroughly aired daily, and a tepid bath at night. Three days later I was summoned in haste to this child again. It had a second attack of cholera infantum, though far milder than the former one. The same treatment was ordered, but not so frequently repeated. The "breaking out" had disappeared. As convalescence progressed, the same after treatment being ordered as before, I was perplexed by the return of the rash, *lichen tropicus*. I repeated my former directions concerning it, and again, following its retrocession, the child had a diarrheal attack which was yet milder than the second. The same treatment was again instituted, and upon convalescence becoming established, the heat-rash once more presented itself. I now ordered the restorative continued and the rash to be let alone. There was no more diarrheal, and the rash ultimately faded away.

I have been unable to find a parallel to the latter part of the above case in the authorities within my reach, but I believe that had I let the rash alone, and continued the restorative, the second and third diarrheal attacks would not have occurred; and this will be my course should I ever meet another like case.

Obviously there must have been some connection between the heat-rash and cholera infantum; and I believe them to have been complements of one and the same pathological condition.

And that pathological condition, it seems to me, consists 1st, of an irritation, and 2d,* of an exhaustion or paralysis of the great ganglionic nervous system. And I believe the primary cause of cholera infantum to be referable to an atmosphere highly heated, and surcharged with the effluvia of vegetable and animal decomposition.

Attacks are precipitated by sudden transitions from heat to cold, improper food, dietary excess, etc., but these, when operative, are exciting causes only. The primary cause (poisonous effluvia) being introduced into the system by the respiration, acts, when not too concentrated or consecutively long continued, as an irritant to the great sympathetic system, causing an increased flow of blood through the capillaries, the result of which is a heat-rash; then, if the heated surface be rapidly, or more slowly but surely cooled, this tainted blood is driven from the periphery to the internal organs; the rash vanishes; the sympathetic is exhausted by the intensified action of the poison; the serum of the blood transudes

* This is also the pathological condition in Asiatic cholera.

into the alimentary canal; and we have cholera infantum. All cases of retrocession of *lichen tropicus* are not followed by cholera infantum. The poison may not be of sufficient malignancy, or the case may pass out of the baneful influence, etc.

Again, all cases of cholera infantum are not preceded by *lichen tropicus*. The poisonous emanations may be of such withering virulence as to paralyze the sympathetic at once.

Now then, the treatment is manifest. *Nux vom.* as a direct stimulant to the spinal nerves, and tonic to the sympathetic; opii as a cerebral stimulant and arterial tonic; belladonna as a powerful stimulant to the sympathetic, restoring the capillary circulation; a diuretic to carry out of the system the products of retrograde metamorphosis; and arsenic as a tonic to the vegetative system, aiding digestion and assimilation.

I use the foregoing formulæ in other diarrheas than cholera infantum; changing size of dose and time of administration as each case requires, and considering amount of febrile action, special symptoms, etc. I do not use them as *invariables*, but add to or take from, as may be indicated; and no man need take them as written, fire them into the sick at random, and expect a cure in every instance. Give each drug a special study and do your own thinking.

Quinine, opium, aconite, veratrum, etc., will each find a place. I frequently find the addition of small doses of *ipecac.* of marked benefit.

A Deadly Spring.—A writer in a California newspaper says: About half a mile over a mountain from Bartlett Springs, there is what is called the Gas Spring. This is probably the greatest curiosity of the mountains.

The water is ice-cold, but bubbling and foaming as if it boiled, and the greatest wonder is the inevitable destruction of life produced by inhaling the gas. No living thing is to be found within a circuit of one hundred yards of the spring. The very birds, if they happen to fly over it, drop dead.

We experimented with a lizard on its destructive properties by holding it a few feet above the water.

It stretched dead in two minutes. It will kill a human being in twenty minutes. We stood over it about five minutes, when a dull, heavy, aching sensation crept over us, and our eyes began to swim. The gas which escapes here is of the rankest kind of carbonic, hence its sure destruction of life; also of quenching of flames instantaneously.

Editorial.

Put yourself in his place.—Recently the board of managers of the Presbyterian Hospital, in New York, took it upon themselves to summarily dismiss four members of the visiting staff, without assigning any cause for their action. One of the results of their course assumed the shape of a protest from sixty members of the medical profession of that city against such a method of management. Within the past month we have beheld a similar procedure on the part of the board of trustees of the Cincinnati Hospital. After much ado, and no small amount of back-action and circus performance, on the part of the aforesaid trustees, the farce denominated "Reorganization" was put upon the boards, the bell was rung, and the entire board put through a course of "now you see it, and now you do n't see it." The result of which was that the entire staff was voted down and out. The next act was the creation of a new staff, wherein a series of most remarkable plastic operations were performed, and which showed a marvelous degree of skill on the part of the operators. No less than thirteen out of fourteen lifeless heads that had been severed and cast into what might have been a common and an unknown grave, were, as if by the hand of a magician, resurrected, and, with the skill of an army of experts, each head, save and except one, was placed where it was supposed it would do the most good—namely, in its former position, as member of the staff of the Cincinnati Hospital. Now, how did it come that but one single head came to miss making the connection? Was that particular head more incompetent than his fellows? Was he direct in duty? Was he more cruel to those placed under his care than the other thirteen; or did he not, on meeting members of the board of trustees, make his salaams low enough to satisfy their almighty highnesses? While engaged in giving instruction to the coming medical men, did he lack ability to teach? Or, at their instigation, did he fail to roar as gently as a sucking dove? If not for these reasons, will the honorable board please to rise and explain?

It is generally supposed that a man receives an appointment as a member of the staff of public hospitals by reason of his merit

and fitness to hold and occupy such a position. Correspondingly do we behold him lowered professionally in the eyes, not only of the people, but of his own profession, when he is dismissed, unless they know the cause for such a procedure. Now, let any member of that board of trustees put himself in the place of the decapitated ex-member of the staff, and what would be his feelings? We are constrained to ask, Are there no bowels of compassion, no sense of right and wrong, no knowledge of common justice to the most ordinary fellow-creature? Of what kind of material are such men made?

In what arduous labor do we next find this high and mighty board of trustees engaged? A meeting is held, and the following resolution presented and adopted:

“Resolved, That the fee fixed by the board of trustees for tickets shall be the only charge for clinical instruction.”

Is it necessary for us to ask who it is that gives clinical instruction in the Cincinnati Hospital? Are we to infer from the above that the trustees are preparing to give a course of clinical instruction at the fee fixed by their board. If the clinical instruction is to be imparted by the staff, the resolution would pertain to them only, and yet, after diligent inquiry, we can not find that any member of the staff was consulted in regard to the adoption of such a resolution; nor do we find that joint meetings of the board of trustees and staff are ever held, and yet, in the very nature of things, the staff must be more cognizant of the actual daily wants and requirements of the hospital than are the board of trustees. Who does not know that the Cincinnati Hospital was founded by a physician, and that the medical profession has furnished gratuitously medical attendance to all the sick poor who have entered its portals from that day to this. For such services are they to be regarded as co-workers in endeavoring to alleviate the ills of suffering humanity. Or are they to be watched and kept under the ban of suspicion, and treated as if they were a band of mercenary hirelings, employed to do chamber-work for a high and mighty board of trustees. Is it at all likely that a board composed almost wholly of men outside of the medical profession, will realize the importance of matters that should be directed either by the staff or by the two boards in joint session?

Will the reorganized staff of the Cincinnati Hospital dare to assert their rights in their official relation to that institution? or will they become cringing sycophants to a board that treats

them as if they were not only inferiors, but menials, whose chief aim in life is to dance attendance at their beck, nod, or whim?

As an illustration of the superior management of the Cincinnati Hospital by the board of trustees in a domain where none will dispute, we find in the fourteenth annual report, under the head of Table No. 8, which shows the names of persons in the service of the hospital December 31, 1874, together with the amount of salary and wages paid each:

ROH'S HILL BRANCH HOSPITAL (SMALL-POX.)			
John L. Cilley, M. D., physician, per month.....			\$50
William Harvey, nurse	"	25
Louisa Harvey, " "			20
William Unthank, librarian	"	25
Total monthly wages.....			\$120

On page 56 of the report we find that Dr. Cilley reports but one case (varioid) treated by him during the year. Cost to the city of Cincinnati to have one patient treated in the Roh's Hill branch of the Cincinnati Hospital during the year 1874, \$1,440. To which should be added for rations, fuel, light, and other necessities to keep the above functionaries in a state of physical activity, at least \$1,000, additional.

If the central hospital is *managed* on the above scale of generous liberality, we are not greatly surprised to learn that the board of trustees have expended during the year more than \$86,000, and are short only a mere bagatelle of \$14,000.

In scanning our daily paper, we have failed to notice that bids are ever solicited for supplies for the hospital; but who would ever presume to say that the high and mighty board of trustees of the Cincinnati Hospital do not perform their labors solely in the interest of taxpayers?

We are in receipt of the following circular:

Nearly a quarter of a century has passed since Horace Wells, the discoverer of anæsthesia—a safe, speedy, and effectual means of abolishing sensibility and consciousness—died.

No monument has yet been erected to perpetuate the memory of Dr. Wells, or, in connection with his name, to commemorate this wonderful discovery. He gave most willingly and cheerfully, wishing it, in his own words, to be "free as air," the use of this boon to humanity; asking of his fellowmen, in return, nothing beyond the

proper appreciation of its worth, and the honor that justly belonged to the discoverer. As its importance became more widely known, and the world learned by experience the amazing value of the discovery, the feeling was naturally awakened that some positive movement should be made toward the accomplishment of this long-delayed duty.

Entertaining this sentiment, doubtless, the legislature of Connecticut, some two years ago, appropriated five thousand dollars (\$5,000) for this purpose, and the city of Hartford a like sum; and under the direction of a committee a colossal statute in bronze of Dr. Wells has been executed by Truman H. Bartlett, Esq., and will soon be ready for erection on some commanding site in the beautiful park in the city of Hartford, where the discoverer lived, where the grand idea which was to embalm his name and memory in the hearts of his fellowmen everywhere, had its birth, and where his remains now rest.

It is upon the pedestal, which should be also of bronze, and its ornamentation, that any further funds will need to be expended. This will admit of high and costly adornment, in bas-reliefs, in inscriptions, etc., suited to exemplify the uses of the discovery, at the same time that it commemorates the discoverer; and we are informed by the most competent judges will admit of large outlay without transcending the limits of a severe and correct taste.

In view of this circumstance, and of the fact, also, that, as the subject has been more freely canvassed, an earnest desire has been expressed in many quarters, both in and out of the state, to take part in this undertaking, it has been thought to be expedient, for the purpose of gratifying this wish, and in order to make the work itself more nearly represent the character and value of the service rendered to mankind by Dr. Wells, to receive such subscriptions from physicians and dentists abroad, and through their agency from the public, in the various parts of the country, as they may feel disposed to make. Our appeal is made primarily to the medical faculty and dental profession, not so much because they have a higher personal interest in the subject than others, but because they, of all men, best know the inestimable value of this discovery to the race.

The committee who submit the foregoing, represent the medical and dental societies of Hartford, and, in so far as our object shall meet the views of our brethren elsewhere, we respectfully ask from them such friendly aid pecuniarily, as they may think proper to

give us, and especially that they take such measures to bring the subject to the notice of their friends and the public as, in their wisdom, they shall consider most likely to receive a favorable response.

Letters of inquiry may be addressed to Dr. E. K. Hunt, Chairman of the Committee of the Hartford Medical Society. Subscriptions may be forwarded to Dr. G. W. Russell, treasurer, Hartford, Connecticut.

E. K. HUNT, M. D.,

M. STORRS, M. D.,

JAS. CAMPBELL, JR., M. D.,

Committee of the Hartford Medical Society.

DR. JAS. McMANUS, *Dental Committee.*

HARTFORD, CONN., *February 15, 1875.*

Obituary.—At a regular meeting of the Clermont County Medical Society, held in Batavia, Ohio, October 21, 1874, the following resolutions were unanimously adopted:

WHEREAS, It has pleased the All-Wise Dispenser of events to remove from us our esteemed friend and professional brother, Dr. L. S. Pease, who died May 24, 1874; therefore be it

“*Resolved*, That as members of the medical profession, we sadly deplore the calamitous event which has deprived us of one of its most exemplary and useful members.

“*Resolved*, That this society tender to the bereaved family and friends generally our heartfelt sympathy in this their hour of trial and deep affliction.

“*Resolved*, That these proceedings be placed on the minutes of this society, and a copy sent to the family of the deceased.

“*Resolved*, That a copy of these resolutions be furnished to the Cincinnati Clinic and LANCET AND OBSERVER.”

J. C. KENNEDY,

W. P. KINCAID,

Committee.

Colonel J. H. Baxter, chief medical purveyor United States army, recently graduated from the law department of Columbian University, was, on motion of Walter S. Cox, Esq., admitted to the bar of the Supreme Court of this district.—*Washington Chronicle.*

The Boston Medical and Surgical Journal for June 17 will be largely devoted to historical matters of special professional interest. Among the attractive features will be the following: 1. A copper-plate portrait of General Joseph Warren, M. D., with quotations from his medical day-book; 2. An original sonnet by Dr. Oliver Wendell Holmes; 3. A paper by Dr. George B. Loring, on the Medical Profession of Massachusetts at the time of the Revolution; 4. A paper by Dr. J. M. Toner, of Washington, D. C., on the Medical Department of the Continental Army; 5. A translation of a Hessian surgeon's notes of some of his American experiences; 6. Reminiscences of a Tory surgeon's part in the Battle of Bunker Hill; 7. A letter from Charleston, South Carolina, upon historical subjects. Persons wishing to obtain copies of this remarkably attractive and valuable number, should apply early to the publishers, H. O. Houghton & Co., Boston. Price, 15 cents.

Wm. Wood & Co., publishers, New York, issue the following caution to intending subscribers to Ziemssen's *Cyclopedia of the Practice of Medicine*: As this great work progresses, it is possible—from some subscribers breaking up their sets, or from other causes—that occasional odd numbers may be offered for sale. Those who desire the complete work are warned against purchasing these, as the publishers do not engage to supply parts of sets. Every subscription must be for the entire work. No volumes will be sold separately.

Ziemssen's Cyclopædia of Medicine.—On page 290 of Vol. III., second text line from the bottom, the word "ounces" should read "drachms." As the error might lead to serious consequences, we would thank our exchanges to give publicity to this notice.—*Record*.

Many of our readers will regret to hear of the death of Dr. Lewis Rogers, of Louisville. He died June 11, of cancer of the stomach.

Errata.—On page 397, line 21 from top of page, for *ounce* read *drachm*. On page 400, line 5 from top of page, for *author's* read *others*, and on second line from bottom of page 400, for *digitalis* read *digitalin*.

Correspondence.

RICHMOND, IND., May 1, 1875.

Editor Lancet and Observer: Will you please state in your next issue that the Union District Medical Society, at their semi-annual meeting, held at Hamilton, Ohio, on the 29th April, ultimo, unanimously passed the following resolution :

“ *Resolved*, By the Union District Medical Society, that there is a degree and a phase of alcoholism manifested by certain mental and physical aberrations, the victims of which could be best treated in institutions created by the state for that special purpose, and into which institutions such victims of alcoholism should be required to enter, either voluntarily or otherwise, under statutory provisions properly framed and guarded.”

So far, I have met with no medical man who does not entirely coincide in the general proposition that there is a class of inebriates who should be treated in institutions provided by the state, though there is some objection to giving the name of alcoholic insanity to the diseased condition which requires this special method of treatment. Resolutions containing this general sentiment, and the further declaration that a suitable name for the mental aberration of this grade and phase of alcoholism, is alcoholic insanity, met with some opposition ; and, although they were not voted down, they were laid over for further consideration at the next meeting of the society.

There is small doubt in my mind that the professional opinion is almost unanimous that this unfortunate class of the victims of alcoholic poisoning, should be adequately and authoritatively provided for by the state.

JAS. F. HIBBERD.

Veratrum Viride.—Having read somewhere, though where and by whom, which I much regret, I am not able to say, that *veratrum viride* was an excellent remedy in puerperal eclampsia, as well as in all forms of sthenic fevers with a bounding pulse, I adopted its use freely with success ; and, further, I have used it also in epileptic convulsions with success, as the following cases show :

J. C., ætat 6, of Irish descent, had convulsions on the morning of April 20, and another fit again in the evening, when I was

called. Pulse, 180; comatose; eyes protruding; skin dry and hot. Gave *viratrum viride*; commencing with gr. j., and increasing gr. j. every half hour, till ten drops were taken, then continued every hour. Next morning, pulse 130, and feeling well. *Viratrum viride* continued for two days. No recurrence of convulsions up to date.

The second case, a little boy two years old, had, as the parents said, one fit when I was called, April 30, when I treated it as above, and up to date there has been no recurrence of an attack.

Of course these cases are not sufficient to class *viratrum viride* as a specific in epilepsy, but I give you these facts that others may be induced to try this remedy in convulsive affections. Possibly we may have in *viratrum viride* a remedy upon which to rely in that dreaded disease, epileptic convulsions.

E. E. RIOPEL, M. D.

Reviews and Notices.

Syphilitic Lesions of the Osseous System in Infants and Young Children. By R. W. TAYLOR, M. D. Wm. Wood & Co., N. Y., Pub'rs.

Notwithstanding the extensive prevalence of syphilis, and the practical importance, and therefore interest, attaching to it, it must be admitted the existing knowledge of the subject is yet very imperfect and altogether unsatisfactory. Any contribution to this knowledge, particularly if coming from a careful, conscientious observer, is to be welcomed. And such we regard the work of Dr. Taylor. Though in its scope limited to the "syphilitic lesions of the osseous system in infants and young children," and not a treatise on the general subject of syphilis, it is yet of so much importance that no one who pretends to keep posted on this disease can afford to neglect it. The book refers to matters of recent observation—matters hardly hinted at in the most complete modern treatises on syphilis. Although cases of syphilis affecting the bones of children have been, from time to time reported, this book is the only one that treats of this branch of the subject in a systematic manner. It would appear that in those cases the more usual form in which the disease manifests itself is in that of enlargements of the extremities of the long bones; or, more particularly, at the diaphyso-epiphyseal junctions. Swellings in those situations might

easily suggest the idea of rickets, and we have a chapter devoted to the differentiation of the two affections, as well as a consideration of the views held on the subject of the dependence of the latter disease on syphilis. A perusal of this work is well calculated to guard the reader against that "gulf of ignorance"—the vague and loose application of the term "scrofula" to certain cases of bone disease.

While heartily commending Dr. Taylor's book, we can not avoid adding the suspicion that, in all probability, certain of the author's views will have to be modified upon further and fuller study of the subject. And we think he is open to the criticism of having undertaken to write with a fullness, and of having attempted a degree of precision hardly warranted by his own experience, or that of other observers he has quoted.

The book is beautifully printed from clear type and on very handsome tinted paper.

Sex in Industry: A Plea for the Working Girl. By AZEL AMES, Jr., M.D. Boston: James R. Osgood & Co., Publishers. For sale by Geo. E. Stevens & Co. Price, \$1.25.

This little volume belongs to a class of publications that are accomplishing a vast amount of good to society and the state, by drawing attention to suitable and unsuitable employments for women and children.

In his labor in this direction, Dr. Ames has had the co-operation and assistance of the Bureau of Statistics of Labor in the State of Massachusetts.

The evil effects of certain employments which require women and girls to assume a standing posture for hours in succession are vividly described. Every humanitarian will indorse the sentiment, that the practice of requiring shop girls, or for that matter girls in any employment, to *stand* behind the counter during all their hours of service, is selfish, cruel, and useless.

The unsuitableness of certain employments for women, as type-setting, on account of the necessity of being constantly on the feet, a position that, for physiological reasons, a female should not assume for any considerable length of time.

A copy of this book should be placed, not only in the hands of every employer of operatives, but of legislators. It suggests many ways of doing good to the great multitude of female workers.

THE CINCINNATI

LANCET AND OBSERVER.

J. C. CULBERTSON, M.D., Editor.

VOL. XVIII.—AUGUST, 1875—No. 8.

Original Communications.

Art. 1.—On some Points in the Ætiology, Pathology, and Remedial Management of the Summer Complaint of Children.

By Z. C. McELROY, M.D. From the proceedings of the Zanesville Academy of Medicine, session June 10, 1875, at Deavertown, O.

The beginnings of life, animal and vegetable, are everywhere characterized by great feebleness, and incapacity for defense against enemies, or adverse conditions to growth and evolution. As a result, the number that die, or have their growth and evolution arrested, and have the stored-up force in their material turned into other channels in the general economy of nature, are, in some departments of the organic world, almost limitless in numbers, compared with those that pass through natural stages of evolution, perpetuation, and final decay. Indeed, the successful hardly have any proportions to the unsuccessful. Fecundity, prolificity, exceeding the limits of prodigality, are the features of the lower, or simpler forms of animal or vegetable life, in their provisions for their own reproduction, multiplication, and perpetuation.

Thus, I have an ailanthus tree in my lot, which has produced, it seems to me, not less than a million seeds during my occupancy of

the premises (twenty-five years), many hundreds of thousands of which have perished without any effort at all at growth and evolution. And each seed, germ, or egg must be regarded as a beginning of life, requiring only external conditions, to pass through all its stages. Other almost countless thousands of seeds have started—*i. e.* sprouted and come up; but as they would serve no useful purpose to me, they cost me many hours of work to destroy them. The cereal grains, cultivated for their food-producing capacities—wheat, corn, rye, oats, barley, etc.—in the temperate zones of civilization, present another illustration, when used as food by man or animals, of failure at the beginnings of life to undergo evolution and decay in natural order. Every grain of wheat, rye, oats, corn, etc., used as food, or destroyed by fire or flood, is an instance of early death—failure to go through normal stages of life. Who of you, gentlemen, will undertake to express, in numbers, the ratio of death to life in its beginnings with them?

Coming within the domain of animal existence, the lower forms of microscopical and insect life, presents the same features of extraordinary fecundity, with a like appalling ratio of failure or death previous to maturity and natural decay. As the scale of ascending complexity in animal life is brought under study in these respects, the numbers of young animals, and indeed at all stages of life, killed for food, not only by and for stronger animals, but by man, presents the same ratio of failure to success in evolution and natural decay.

The struggle for existence, then, not only at the beginnings, but at all stages of life, presents for our study almost incredible ratios of failure to success.

Passing at once to our own kind, man, and looking at the ratio of success to failure at the beginnings of life, there is presented a very different set of figures. Here the successes and failures are very nearly evenly balanced—that is, that of all children born, about one-half have perished before arriving at the age of seven years. And this from all the causes of death combined, avoidable and unavoidable. Viewed by itself, and not in connection with any of the almost unavoidable causes of failure, this ratio of infant mortality seems large—very large. Perhaps it is so, perhaps avoidably so—that is, not necessarily so.

Statisticians tell us that the total population of the globe has not perceptibly increased during the last ten centuries. This conclusion must be estimated in connection with what is supposed to be

the bettered conditions of life, better houses, clothing, and surroundings of the present, and just preceding centuries, certainly distinguished for development of intellect, learning, and skill in science and art. It may not be flattering to our professional pride or vanity to know, that though physicians have, as it is sometimes expressed, "battled bravely, and successfully and unsuccessfully, with diseases," the victory—prolonged life and multiplication of its numbers—refuses to perch on their banners. Children continue to be born and die despite our efforts and skill. Mortuary statistics carefully studied, tell us the humbling tale that certain telluric—that is, conditions of weather or physical forces—are followed by increasing or decreasing rates of mortality among the young, middle-aged, and the old, without being much influenced by what physicians do. Thus, the death rates in twenty large cities of England vary weekly and monthly, exactly with the variations of the weather, from 20 to 40 per 1,000 inhabitants, per annum—the yearly aggregate ranging from 26 to 38 per 1,000, in different cities, Liverpool being the highest. The heated terms of July and August mean a large death rate among children; a cold snap in December, January, or February, a large death rate among the aged.

The topic assigned, Mr. President, for discussion to-day, is the summer complaint of children, the cholera infantum of nosology, or simply, bowel complaint. Why call it "summer complaint," and not spring, autumn, or winter? Simply because the special phenomena presented by children which we call summer complaint, is one of the incidents of hot weather. The first decisive frost in the autumn cuts off recruits; the old or long standing cases speedily improve and get well, or hasten to the cemeteries.

The dependence, or mutual relation between summer complaint and hot weather, is rather better known than the whys and wherefores. Still, there are some things known with tolerable certainty. Thus, the food upon which we subsist differs essentially from that used during most of the remainder of the year. Small fruits, green vegetables, melons, etc., are presented in tempting perfection. The dress worn is different from that of all the other seasons. A summary may be expressed in these words, "changed conditions of life." That all life, animal and vegetable, is dependent on purely physical conditions, is now, I think, accepted as a fundamental truth by all biologists and naturalists. As conditions change, living organic structures are more or less changed or modified; and with changing and changed structures, changes of function follow

closely. If there were no changed or changing structures, there would be, as there could not be, any changed or modified functions. And if there were no changed or modified functions, how, let me ask, would any of us ever know we were sick? Is not our diagnosis based altogether on changes of function presented by the sick?

But changes of structure are occurring all the time, well or sick, to all of us, old or young. It is changes of structure that have made so many of us grow old. We judge of age by changes of structure.

And this brings us face to face with the summer complaint of children. Almost the first notice or symptom a child gives of sickness is vomiting. Previously, the thermometer would tell us that there was an advance or elevation in the temperature of its body. Parents, however, do not apply thermometers under the arms of their children when apparently well, any more than doctors. Both parties are content to wait until changed functions announce sickness. Next, the contents of the bowels run off. Food is refused, or certain kinds are refused. The contentment characteristic of a child in health, gives place to peevishness, fretfulness, and inability to rest or sleep. But the changes of structure are not limited to the stomach and bowels. Convulsions may early occur, instructing in the most unmistakable manner, that changes have occurred in the brain and cord, and other nerve centers.

And that is a simple and truthful statement of the matter of the pathology of the summer complaint of children—viz., changes of structure preceding the changed or modified functions, which are themselves the diagnostic symptoms of "the disease." And, so far as function is concerned, it matters not what has been the nature of the changes, the result is the same—modifications of function corresponding to the extent of the changes of structure, up to its total abolition, which means, so far as important organs are concerned, death.

The mischief to structure, I repeat, occurs prior to the changes or modifications of function—has already occurred when physicians are called to prescribe for the little patients. The sappers and miners, so to speak (the causes which produce changes of structure), do their work quietly, secretly, and silently, and, as results in so many cases but too plainly demonstrate, effectually. The changed conditions of life surrounding the young in summer, in the towns more especially, seem to me like a woodman cutting away at the base of a tree, just out of sight and hearing of ob-

servers constantly watching it. The tree gives no warning of the progress of the woodman's work until it commences falling.

So, in the structures of the young; little by little the changes take place in secrecy and silence, giving, it is true, more warnings than the tree that mischief is going on within. But in the bulk of cases these are unheeded, until decisive sickness, decisive failure of function, announces itself by vomiting, bowel complaint, or convulsions.

Fretfulness, the lessened demand for food, new material, the elevation of temperature, etc., are unheeded, or explained away in parents' or attendants' minds by referring the child's condition to the heat of the weather, or other causes or circumstances.

The prognosis in any given case must rest on the extent and character of the changed functions presented for observation, study, and treatment at the hands of the physician. The savants in my student days told me that a pink edging to the wet spots on diapers was generally, if not always, a fatal sign. They did not tell me that the pinkish hue was due to the presence of the red corpuscles of the blood, and that the structures of the intestines were so altered, that they allowed them to escape mechanically; yet such is the fact, and a fact of the utmost gravity, as they told me. Remembering that the beginnings of life are very unpromising—that in the struggle for existence, for development, which all living beings and things have to make, much the larger proportion perish, the prognosis must be largely influenced by surroundings, conditions of life of the sufferers, and in the bulk of cases in large cities and towns, unfavorable.

Prevention is better than curing. Therefore, sanitation, or state medicine, as hygiene is christened now-a-days, seems to be the strong man, able and willing to help, who has been so long expected, waited, and watched for, to deliver the young from this great enemy of their lives—failing tissues in hot weather. The mortuary returns attest only too plainly the insufficiency of drugs and medicines to restore them to normal character again, surrounded by the same conditions that occasioned them.

State medicine, or sanitation, as hygiene is now called, must be the leading remedial measure. In our country at present, we have little or no state medicine out of a few large seaboard cities. Inland river and lake cities pay little attention to sanitation, only as scared into it by some present, or apparently approaching pestilence. England has taken up state medicine in earnest, and is working

away at some knotty problems in improving the sanitary condition of her densely populated centers. We may reasonably hope for the inauguration of a compulsory system of state medicine in our own centers of population in the not distant future.

The indications for the professional management are not limited to restraining the discharges from either, or both, stomach and bowels, nor to arrest the accompanying febrile movement. For, it seems to me, that, after the occurrence of the initial phenomena, if the temperature remains higher than natural, it must be regarded just as any other acute specific disease—the return to health being through a definite series of changes, the first of which being set up, the only path to health is through the occurrence of the remainder in regular succession.

With high ranges of temperature, the remedial management will be that of typhoid or continued fever, irrespective of the local symptoms of loose bowels and vomiting; facilitating, not only the combustion by the fever process of abnormal tissue, but the elimination of the effete products resulting from the increased rate of waste. It may be needful sometimes to retard excessive motion by *veratrum viride* or *gelsemium*; or to modify and facilitate waste by minute doses of *creta ppt.*, calomel, or blue-pill. In the same class as the mercurial preparations are the salines, carbonate and chlorate of potassa, bromide potassium, lime-water, *creta ppt.*, citric acid, etc. Even where the bowels seem loose enough to omit purgatives or laxatives, castor or sweet oil, singly or combined, or calcined magnesia, or even epsom salts in small doses, are often followed by the most decided improvement.

The vegetable astringents, as well as lead, which are apparently so urgently demanded at times to restrain excessive discharges, are inappropriate with high ranges of temperature.

For procuring rest and sleep, chloral hydrate, with bromide potassium, with, in some instances, Dover's powder, paregoric or valerianate of ammonia, are our most satisfactory agents—chloral playing a more conspicuous part than opium in any of its forms. I think I am safe in saying that morphine should never be thought of, much less given, in any dose, however small, to very young children. And in all our prescriptions for them, it is best to bear in mind that they are terribly sensitive to most medicines, but particularly to those that put them to sleep. Latterly, I have been able to reduce temperature, get rest, relieve pain apparently, and get on generally toward health, by using water in various ways.

The chilly pack, and from chilly to decidedly warm baths ; cloths wet with water from cold simply, not ice cold, to the warmest that can be borne, has brought many pleasant results, with no disagreeable after-claps. Getting rest by the chilly pack, and it can be done on the mother's lap, is not followed by the sleep that knows no waking. I have sometimes had a child's body in chilly cloths, head and feet in warm ; and the reverse, body in warm cloths, and feet and head in cold. The temperature should rarely be below 45° for any cold applications, or above 110° F. for warm.

With lower temperature, say 100° to 103° , with bowels fairly open, kidneys and skin performing duty, the constructives ought to be given, coincidently with opening and anodyne measures. The most important of these are quinine, bismuth, pepsin, iron, simple bitters, the mineral acids, particularly the muriatic, with not unfrequently malt liquors, and sometimes spirituous liquors.

Alcohol has its place, serving often to retard the pace of necessary, as well as unnecessary waste, and aiding in the adjustment of badly balanced processes.

Local complications are to be met just as they would be managed under any other circumstances—cold applications and warm poultices ranking among the safest external applications.

The diet might almost be said to be limited to two articles, milk and bread. Crackers, and fancy cakes, as a rule, can not be digested, and only serve to wake up to activity the bowels, as well as the stomach, causing diarrhea, pain, and restlessness. The starches, as arrow-root, sage, corn-flour, and all patent foods, are simply cheats, they are not digested, but pass off from the bowels as starch granules at all stages of decomposition.

Meat essence, fats, and oils often agree well. Small fruits, with the single exception of blackberries, are seldom appropriate.

A mental picture of the duties, possibilities, and probabilities of medical service to these interesting beginnings of life, suffering with the summer complaint, should not be that there is a something in them which it is possible to expel by medical means ; nor yet a "disease" which ought to be, even if it is not now-a-days generally "cured," by some drug or medicine, singly or combined. Rather let it be that the mischief to structure, brought about by changed conditions of life, whose changed functions constitute the symptoms of the so-called "disease," requires, like small-pox, measles, typhoid fever, etc., a succession of changes which may be, to some extent, guided through to a favorable termination—that is,

a return to health. Summer complaint is never "cured" by anybody, or by any means, any more than small-pox, only as the necessary changes are facilitated which are necessary to and end in a return to health. Never forget, that appalling as the mortality seems when viewed only as it relates to human life, it is yet small indeed when compared with like failures to get a footing in life, to reach the point of self-defense and self-support in other departments of organic life, animal and vegetable.

Art. 2.—Cholera Infantum.

Remarks on the Pathology of Cholera Infantum, made during the discussion of that subject before the Zanesville Academy of Medicine, by HOWARD CULBERTSON, M.D.

I propose to-day to invite the attention of the Academy to the pathology of cholera infantum. Before doing this, however, the statistics of the disease may be referred to. Without entering fully into this subject, we may cite those of Edward Jarvis, in the "Fourth Annual Report of the State Board of Health" of Massachusetts, for 1873; also, to the cases reported in the New York Medical Record, 1874, for the deaths in New York city, for the year ending December 31, 1873; and to the tables of Gouverneur Emerson, in Vol. I., 1827, p. 116, of the American Journal Medical Science, which embrace cases occurring during twenty years in Philadelphia. The sum of these statistics is as follows:

Jarvis Cases—No. deaths from all causes	10,000	Cholera Infantum, 1,740
New York " " " "	29,054	" " 3,634
Emerson's " " " "	26,239	" " 3,812
Total, " " " "	65,293	" " 9,186

Thus it will be seen that in 65,293 cases of death from all causes, 9,166 perished from cholera infantum or diarrheal diseases, or over 14 per cent. It can not be doubted that a certain per cent. of these cases died from diarrhea simply, at seasons of the year in which genuine cholera infantum does not prevail, and hence this mortality is somewhat incorrect. At the same time it must be remembered that simple diarrhea is often a forerunner of cholera infantum, and hence the close relation of these two affections. It is also probably true that were an estimate made of the deaths oc-

curing in the hot months from all diseases, the per cent. of mortality in cases of cholera infantum would be found higher in these months, during which time it prevails most extensively and almost exclusively in large towns and cities of the Middle, Eastern, and Southern States. Whatever may be the nature of this affection, a high temperature is the great essential in its development, though a want of ventilation, unwholesome food, uncleanness of person or abodes, the presence of decaying or unwholesome emanations, defective drainage, a want of exercise, the influence of dentition, a feeble organization, or the agency of any cause calculated to depress the powers of life, will doubtless aid in the induction and maintenance of this affection.

Allow, if you please, reference to authorities as to this disease.

Prof. Hartshorne, in his *Principles*, says some change in the follicles of the intestines and the mucous membrane of the intestines are generally present, yet he regards the disease as a systemic one. Its seat, he thinks, lies in the whole nutritive system, including the ganglionic nerve centers. Sanguification is impaired, and hence impure blood deranges the action of the nervous centers, followed with apathy, stupor, and often convulsions. He states that its greatest prevalence coincides with a rise of the thermometer above 90° Fahr.

J. Lewis (see *Flint's Practice*) states that in thirty-seven autopsies, he has been able to convince himself that the green color of the vomited matter is not due to vitiated bile.

Prof. Flint states that the disease is due to a variety of causes, embracing cases of cholera sporadica, diarrhœa from indigestion, enteritis, colo-enteritis, and dysentery; that the head symptoms are not due to inflammation of the encephalon, but are associated with the hydrencephaloid condition; that softening and injection of the cerebrum has been found, but states this is not the result of inflammation. He states that the Northern and Middle present more cases than the Southern States.

Rokitansky states (see *Pathological Anatomy*) that there may be found in this disease plastic deposits upon the peritoneal coat of the bowel.

The late Dr. Condie states (see *Watson's Practice*) that post-mortem examinations reveal, in cases of short duration, an abnormal paleness of the mucous membrane of the bowels, and congestion of the liver. When the progress of the disease is more protracted, increased redness in patches or points is developed in the

lining of the stomach and bowels; occasionally this membrane is softened without the slightest evidence of inflammation. Again, this membrane is reddened generally, and often the caliber of the bowel is greatly contracted. The mucous follicles of the intestines are generally enlarged, often inflamed, and sometimes ulcerated. The intestines are generally empty or contain a small amount of tenacious mucus. The liver is almost invariably enlarged and more or less congested, the gall-bladder filled with dark-green bile or a pale and almost colorless fluid. The liver is sometimes soft and spongy. In protracted cases, evidences of meningitis are often present. He thinks the disease is dependent upon the influence of a heated, impure, and stagnant atmosphere, acting directly upon the skin, and indirectly upon the digestive mucous membrane, and that it arises from a high temperature aided by the effect of unhealthy surroundings. Emaciation is an invariable attendant of the disease, unless the progress is very rapid.

Da Costa (see Medical Diagnosis) says, in this disease the discharges are colorless, yellowish, or greenish; that the disease may run its course in three or four days, in which case the patient dies worn out with the vomiting and purging; that generally the child dies from exhaustion, the effect of the want of food, the irritability of the intestinal canal being such that a sufficient quantity of food can not be retained to nourish the body.

Meigs and Pepper (see work on Diseases of Children) state that in this disease the mucous follicles, and in less degree the glands of Peyer, are softened, and in some cases exanthematous inflammation of the mucous membrane is present, and believe these states depend upon an early stage of inflammation of the intestinal walls and of the mucous follicles. They remark that no careful microscopical examination has yet been made to determine the exact state of the epithelium of the mucous membrane of the intestines in this disease, and believe that such an inspection would reveal, as in cholera sporadica and morbus, a rapid proliferation and exfoliation of the cells of this membrane. They think the heat and other causes act by inducing mal-nutrition. This changes the entire blood mass as well as the character of the contents of the intestines, and the latter irritate the bowels.

Barthez and Rillit regard this as a catarrhal affection, located upon the mucous membrane of the stomach and bowels, and affecting also the sympathetic nervous system. They think the system

is poisoned. They state the following lesions developed on post mortem :

a. The stomach may be softened without lesion of the digestive tube.

b. The stomach may be softened, and also the mucous membrane of the intestines diseased, especially the follicles.

c. The stomach may be healthy, while the follicles and mucous membrane of the intestine may be diseased.

d. No lesions may be found.

These gentlemen state that the amount of waste will not account for the symptoms always, but refer the disease to the affection of the sympathetic system. They cite Moreau's experiment that after section of the sympathetic nerve supplying the intestines, a copious secretion of alkaline serous fluid takes place into the bowel. They state the temperature may be normal at first. It may then rise, and sometimes the skin becomes hot. Finally, it is reduced.

After having reviewed thus briefly authorities upon this disease, it may be asked what is the nature of this affection. The pathological developments show clearly that although the abdomen, and especially the intestinal track, seems always to be affected, that still structural lesions are not constant in this region. Thus, no lesions have been discovered, and again the most extensive have been found. Neither the liver, spleen, kidneys, pancreas, stomach, or bowels may show any pathological changes. Again, the lesions found in this region, and in those of the chest and head, may differ widely. There may be a pale, congested, or inflamed state of the mucous membrane of the alimentary canal. The mucous follicles may or may not present engorgement, inflammation, or ulceration. The liver may be enlarged or softened, or simply engorged. The gall-bladder may be full or empty, and its contents may be green or pale. The color of the contents of the intestines may be of various hues. The temperature may be elevated or depressed. The discharges may be abundant or limited. Emaciation may be great or but slight. Vomiting and purging may be free or limited. Inflammation of the brain, or the hydropcephaloid condition, may be present. Convulsions or stupor may be encountered. In short, we are forced to conclude that there is no uniform structural lesion found, nor is there a uniform train of symptoms developed in this affection. But a careful survey of the symptoms, history, and the pathology of this disease enables us, I think, to detect one system which is always deeply affected in this

disease, viz., the nervous. We do not refer alone to the sympathetic, but to the entire nervous system. Indeed, if we regard, with H. C. Wood, the sympathetic as an offshoot of the cerebro-spinal nervous system, which it probably is, there is no need to single out the sympathetic in this affection, although it may be more deeply involved than the cerebro-spinal.

Then we maintain that the nervous system is the primary seat of this disease. There may be prostration, or there may be increased action, pyrexia, or apyrexia. Excessive purging and vomiting, or such exhaustion as to be scarcely either, approaching almost a condition similar to cholera Asiatica. Allow me to trace a case: During a hot day, a child, perhaps not quite well, is taken into the sun. Shortly it becomes depressed, grows nauseous, and soon has a large evacuation, followed by increased prostration. The child demands water, which it at once ejects. Soon vomiting and purging are established; more active fever and an elevated temperature may follow; emaciation progresses; thirst is intense, and later, insensibility may come on. Convulsions may supervene, and death may release the sufferer early or late.

Pathologically speaking, what has taken place? At first, the heat of the atmosphere, aided by the influence of the unhealthy surroundings, impressed injuriously the nervous centers. By reflex action, the derangement thus brought about in these centers was transmitted to all parts of the body through the nerves. Through the great pneumogastric this impression reaches the abdominal organs, and early and naturally, as we would "*a priori*" expect, nausea, and also relaxation of the bowels, results. The process once set up, and the cause (heat) persisting in its agency, the disease of innervation continues; and now, perhaps, we have an effort at reaction. The heat processes gain the ascendancy for a time, but the cause still potent for evil—nausea, vomiting, and purging—continue, and may reduce the temperature of the body. Now the system feels the loss of food. The bowels are irritable; the blood flows to them in increased quantities therefrom. Through the enfeebled vaso-motor influence, the capillaries of the mucous membrane of the bowels are overloaded with blood; or, from the excessive irritation transmitted from the nervous centers, these are contracted, and the membrane may be found pale. The heart may be enfeebled in its action, and hence the surface may lack blood and the venous system become distended with blood. The morbid action which began in the nervous system is now general. Food

is no longer supplied, and hence the system labors under the presence of depraved food, and suffers for the want of nitrogenous and non-nitrogenous aliment. The composition of the blood must then become depraved, and the nervous centers receiving such nutriment, are now further deranged in their action, and we have now added to the ill influence of heat the perversions of mal-nutrition. But although the lungs may be clear, deteriorated blood can not be wholly purified by these organs. The respirations become imperfect and shallow, from the lack of power, and hence the evil of an undecarbonized and a blood lacking in oxygen is added to the complications of the case. Again, the food supply being cut off, the secretions become deranged. They possibly may contain damaged materials unfit for the functions intended. Thus, out of the imperfect albuminose, the stomach can not elaborate healthy pepsin, bileverdin, pancreatin, ptyaline, mucosin, and neither can the kidneys eliminate a damaged urea. Thus the system is crippled again. Finally, the scene closes when the impoverished blood is no longer fit to excite the nervous centers to stimulate the several organs of the body to action, or when structural lesions are set up incompatible with the integrity of a vital organ.

Such, then, is a brief picture of what we believe may possibly one day be shown to be the nature of cholera infantum.

Art. 3.—Therapeutic Reminiscences.

By ALEX. McBRIDE, M.D., Berea, Ohio.

NO. I.

I propose to write from time to time, as convenience serves, what I have learned of therapeutics by an experience of thirty years. I do not design to trace or traverse that which has already been well written by others, but merely to write that which I have learned, additional, and which is not generally known.

I am not prolific of apologies, and shall make none here, but the present article requires an explanation. In September, 1873, I published in the LANCET AND OBSERVER an article covering partially the same grounds as the present, but owing to a misprint of one word in a formula, I find it was extensively misunderstood, and has not been productive of as much good as it otherwise might have been.

The subject of this article is arsenic, strychnia, belladonna, opium, and cubebs. These we will treat of individually and in combination.

ARSENIC.—Some physicians are very timid in the use of anything which may act as a poison. Let all such feeling be discarded at once, for nothing is a poison unless used in quantity sufficient to act as such. A person may take arsenic every day for a hundred years and not be poisoned. The same may be said of each of the so-called poisons. Poison is a relative term.

Besides the effects of arsenic as generally described by authors, I have found that it exerts a decided alterative effect on the mucous membrane of the entire tract of the alimentary canal. In my hands it has exceeded every other remedy in the cure of all forms of diarrhea, except that of enteritis; nor do I mean to include a diarrhea caused by excess of food of any kind. I have used it with unvarying success in the treatment of all forms of chronic diarrhea, also in the diarrhea of typhoid fever. In all cases of chronic diarrhea, following army life, the arsenical treatment has been successful. In the serous diarrheas, embracing cholera, cholera infantum, and cholera morbus, it has proven itself beneficial. Diarrhea caused by protracted living over wet cellars, or standing water under floors and about dwellings, has been promptly cured by this remedy.

It is my opinion that the great efficacy of arsenic in obstinate cutaneous eruptions results from its restorative action on the mucous membrane of the alimentary canal.

To prove further the alterative action of this drug on the mucous membrane of the alimentary canal, it is sufficient to state that it is just as efficient in curing obstinate constipation as in the cure of diarrhea. Dr. Miner, of Connecticut, in 1823, said that opium should always be prescribed with arsenic to qualify its action. Dr. Kirtland, of Cleveland, twenty years later, said that the best and safest way to prescribe arsenic was to give the same number of drops of *tr. opii* as of the mineral solution. I have found this an excellent rule, and have always followed it, and when giving the *potass. arsenitas* in pill, I have used a corresponding amount of opium.

Another thing I hold to be important. I generally prescribe diuretic medicines with arsenic, especially in cases where there is a prospect of its being long used. This aids in the elimination of the desintegrated matter and furthers the effect decidedly. This I

do in the case of all powerful medicines which of themselves promote no particular secretion.

STRYCHNIA.—I do not claim anything new of strychnia, but propose here to caution the inexperienced against relying on it as a *general tonic*. In this age of manufactured pills and elixirs a doctor of old-time ideas is surprised to find strychnia in almost everything. I believe it has been pretty well demonstrated that strychnia has certain *special tonic properties*, among which is its tonic effect on the muscular portion of the alimentary canal; whether through the spinal or sympathetic systems of nerves I shall not here discuss. I think it has not been demonstrated that strychnia has *general tonic properties* so as to take the place of the bitter barks, roots, and woods, etc.

BELLADONNA.—The chief thing I have to say about belladonna is that it is a powerful revulsive; that it transfers the energy of the circulation from the central parts of the body to the surface, in some cases of disease, in a manner not equaled by any other remedy. This fact, I think, has escaped general observation. In a serous diarrhea, in case of a fair-skinned child (I have elsewhere stated that *heat-rash*, and its sequence, cholera infantum, are more liable to occur in the blonde than in the brunette), a proper dose of the medicine will change the surface from florid to red in about twenty minutes.

Many suppose that belladonna and opium are antagonistic in their action. I think this error has arisen from a want of accurate knowledge of the therapeutic effect of belladonna. I have talked with many physicians who had never seen the red flush produced by the action of this medicine, which proves that they knew but little about its proper dose or effects. The red flush will seldom be seen in dark-skinned persons. Belladonna and opium, in *all cases where both are indicated*, act in harmony.

When belladonna is given in full dose for several days, the red or scarlet flush is sometimes followed by a punctate rash, not distinguishable from scarlatina. This, I suppose, is the effect which should be desired or aimed at, when belladonna is used as a prophylactic against scarlatina.

OPIUM.—I have nothing new to say of this drug, but I introduce it here to complete the set, and call the reader's attention to its valuable property of giving tonicity to the arteries and capillaries when debilitated by loss of blood or serous discharges. This

property eminently fits it for the combination into which it is about to enter.

CUBEK.—This drug sometimes produces one effect of which I have never read or heard any one speak, and which clearly indicates its importance for certain uses. In the dose of two to four drachms of the powdered cubebs, it will sometimes cause, in a short time, a rash which might be mistaken for scarlatina.* It may be claimed that this is in consequence of irritation of the mucous membrane of the alimentary canal, and not a salutary effect; but, if so, the same might be said with equal force of camphor and turpentine, both of which sometimes produce similar effects, and in fact of belladonna also. Of the diuretic effect, and its effect on the air-passages, I need not speak here,

Now let us put these potent remedies together, and see if they will act toward one result. Suppose a case of cholera infantum which is the result of retrocession of heat-rash.† The patient is pale and shrunken, and is being rapidly exhausted by copious evacuations of serum. The indications are to arrest the flow of serum from the capillaries into the bowel, and thence out of the body; and to this end to drive the blood to the surface, and to give tonic to the capillaries and the muscular tissue of the bowel.

By a consideration of the therapeutic action ascribed to each of the above remedies, it will be seen that they combine all the requisites for these indications; hence we construct the following formula:

R Sol. potass arsenitas.
 Belladonna, fl. xt. āā. M. xxj.
 Sol. strychnia (1 gr. to flʒ), M. lxx.
 Tr. cubeb, M. ccxxviiij.
 Spts. aeth. nitr. M. cxi.
 Morph. murias, grs. v. F. sol.

After the great power ascribed to cubeb, it might be supposed that a larger quantity should enter into the formula. The fact is, its bulk hardly admits of its use in large doses in these cases. It is used here as a diuretic and whatever more it may effect.

Now in this arrangement, if the patient be an adult, and the common teaspoon be poured conveniently full, the patient will get about one-seventh of the whole, which will contain 10 minims of

* This fact I discovered by accident many years ago.

† See *Lancet and Observer*, September, 1873, article *Cholera Infantum*.

the sol. strych., 3 minims each of the mineral solution and of the ext. belladonna, and $\frac{1}{8}$ gr. of morphia murias; and if it be a case of cholera or cholera morbus, the effect will be very decided. If it be a case of typhoid-fever diarrhea, and the dose be given two or three times in twenty-four hours, it will produce a very marked favorable change. In the choleraic class of diarrheas, the dose may be repeated every second or third hour, according to severity. For a child two years old, ten drops may be given, and if the child be florid, you will be liable to see the face and neck become very red, although it gets only about one-third, or less, of a minim of the fluid extract of belladonna.

This is a fine instance of the enhanced value of medicine by combination, for there is no one or two of the ingredients of this formula that would produce the effect in the same or any other quantity. In the case of the child, the medicine will seldom require repetition oftener than every three hours, or more; but the doctor must be his own judge as to that. Of course, in case of collapse, cantharides and mustard must be considered.

That this combination has proved a sovereign remedy in my hands, and in the hands of others since its first publication, is unquestionable.

The spirits of nitre is added to increase the diuretic effect, on the principle that two or more medicines of a similar kind are more liable to produce the effect than one. This is especially true of diuretics.

Now a few words about the application of arsenic to chronic diarrhea, and I am done. The dose must be small; in fact, I am of opinion that many men have run foul on arsenic by giving too large a dose. On one occasion I began the treatment of the worst case of chronic diarrhea I ever saw. The dose was three drops of the solution, and the same of tr. opii. The effect was wonderful after a few doses; the entire intestine was thrown into action, and a quantity of fecal matters discharged, which it did not seem possible he could have contained. The commotion soon subsided and the medicine was resumed in two-drop doses. The patient made a rapid improvement. Every case will not require so small a dose, but I would not advise commencing any case with more than three or four drops. In very debilitated cases, five to ten drops of solution of strychnine may be given three times per day, part of the time as an adjunct.

; A convenient pill for the same purpose is thus :

R Potass. arsenitas (crystals), grs. v.

Pulv. opii. grs. xxv.

Pulv. piper nigr. grs. cc.

Mucilage, q. s.

F. pill, No. 250.

The pill contains arsenite of potass. about equal to two minims of Fowler's solution, and one-tenth of a grain of opium. The treatment may be commenced with one, or at most two pills, three times per day.

As I am writing for utility, and not for ornament, I will offer a pharmaceutical suggestion. The liquid mixture above given, and which is called here "choleraic mixture," requires some care in the making. Let the tr. cubeb be well filtered and stand till it is perfectly clear, then proceed thus : Dissolve the morphia in the spirits nitre, then add the other ingredients thus : tr. cubeb, sol. strychnia, belladonna, potass. arsenitas. By observing this order, you will get a mixture with but trifling precipitate.

The crystallized potass. arsenitis will hardly be found in the shops, but a skillful pharmacist can readily make it.

Art. 4.—Astigmatism.

Illustrative Cases from Clinical Memoranda. Read before the Ohio State Medical Society, June 18, 1875. By J. H. BUCKNER, M. D., Cincinnati, O.

The term astigmatism "is a compound Greekword, derived from *a*, and stigma from *stigo*, and signifies that rays divided from one point do not again unite into one point."* The subject has been divided into regular and irregular astigmatism. When the acuteness of vision is not materially diminished by astigmatism, it is said to be normal, and abnormal when vision is much distorted by it. Regular astigmatism exists, to some degree, in almost all normal eyes. This fact any one may determine by noting the farthest point at which fine vertical lines and hori-

*Mackenzie: A Practical Treatise on Diseases of the Eye, 1854, p. 927.

zontal lines may be acutely seen. The majority of persons having normal eyes, will find that they can plainly discern vertical lines at a greater distance than horizontal lines. Donders† explains this by stating that rays emanating from vertical lines, which strike the vertical meridian of the eye, are more speedily brought to a focus than those of equal divergence situated in a horizontal plane. He further says, that the cause of regular astigmatism is to be sought partly in the cornea. "Numerous experiments have shown that the cornea, in its several meridians, has a different radius of curvature. It is thus established in the first place, that the cornea, on account of its form, produces astigmatism; in the second place, that even if the crystalline lens has an influence, the direction given to it by the cornea, in general preponderates."

Irregular Astigmatism.—Irregular astigmatism has been also divided into normal and abnormal.

The normal form has been proved to be due to the structure of the crystalline lens, by the fact that when the lens is absent from the eye, all phenomena of irregular astigmatism are removed. The abnormal degrees, on the contrary, which considerably disturb the power of vision, may depend upon irregularities of the cornea as well as upon those of the lens.

We can not precisely draw the line of demarcation between normal and abnormal astigmatism, but may consider it abnormal whenever the disturbance of vision is sufficient to attract the attention of the person affected, or whenever upon trial, the patient, from this cause, is unable to read No. 20 of Snellen's test type at twenty feet. Donders had fixed the standard for the commencement of abnormal astigmatism whenever the degree was one-fortieth; he, however, found that a cylindrical glass of one-eightieth, held before his own eyes, materially improved the distinctness of images.

The importance of this subject may be better appreciated when it is understood that, according to the most eminent authority, "in every forty or fifty eyes, one is, in consequence of astigmatism, disturbed in its functions" (Donders). And in high degrees of the affection, vision, unless assisted by proper glasses, may become comparatively useless for all the practical duties of life. It is no less remarkable than humiliating to us, as specialists, when we consider the number of eyes that were either maltreated or left in

†Donders upon Accommodation and Refraction of the Eye.

partial darkness, without treatment at all, through the many long years which intervened from the first discovery of this anomaly of refraction and its full and complete description, practical demonstration, and general recognition by several of the eminent oculists of Europe more particularly by the eminent scientist, physiologist, and oculist, Prof. Donders, of Utrecht. In this connection it may not be uninteresting to this society to briefly trace the history of astigmatism. It is a curious fact that while we are so largely indebted to the Dutch and German oculists for the thorough and exhaustive investigations into the cause of astigmatism, the honor of its discovery is due to Thomas Young, M.R.F.C.S., who first observed the defect in his own eye, and described it in his "Philosophical Transactions for 1793." He communicated his discovery to the optician Cary, who stated that he often found that near-sighted people distinguish objects much more acutely when the glasses suited to them were held in a particularly oblique direction before the eye; by this means a part of the astigmatism may be corrected. Young sought the source of the astigmatism in the crystalline lens, and from experiments supposed it to be due to an oblique position of the lens.*

The next case of astigmatism recorded, was by Airy, in 1827, thirty-four years after Young. He detached a high degree of myopic astigmatism in his own eye; he also determined the proper glass for its correction.

Next came Stokes, who invented an astigmatic lens for determining the degree of astigmatism,

*The brilliant discovery of Dr. Young will, I hope, excuse some slight sketch of his life at this point. He was a remarkable man; from youth until his death he was a devoted student of natural philosophy. He was born in 1773; studied medicine in 1792; in 1800 he became a member of the College of Physicians, and settled in London, where he began to practice. In 1801 he was appointed a professor of natural philosophy in the Royal Institution. He was not popular as a lecturer; his style being too condensed, and the matter of his lectures unsuited to the miscellaneous audiences of the Royal Institute. He was not more fortunate in pleasing patients; for it is recorded of him that his efforts to secure them were a failure. (Patients then, as now, were often misled by the showy allurements of quacks and pretenders.) His most valuable paper was probably upon the discovery of the law of interference of light. He was elected a fellow of the College of Physicians, also physician to St. George's Hospital. "He was the first to suggest the mode of investigation, by which the received interpretation of hieroglyphics has been arrived at."—*Circle of the Sciences*.

In 1847 a case was reported by Hamilton, and in 1848 a few cases were published by Dr. Goode.

Three cases of this anomaly are reported by Hays in his edition of *Lawrence on Diseases of the Eye*, 1854, page 669.

Donders quotes the above cases in detail, and says that only one more has been recorded (up to that time), which was observed upon the Continent of Europe. It was described by Pastor Schneider, of Switzerland, Canton of Lucerne, who discovered this anomaly in his own person. He was near-sighted for vertical, and far-sighted for horizontal lines; he used bi-convex cylindrical glasses combined with bi-concave spherical, for correction. Up to this time, the source of this defect in normal refraction had not been determined. "Young presumed it to be in the lens; Airy did not publish any opinion as to its seat." Wharton Jones, in his second American edition of *Ophthalmic Medicine and Surgery*, under the head of the cylindrical eye, mentions Airy's case as an exaggerated degree of the natural form of the cornea, so as to disturb vision.

Wilde, of Dublin, is quoted by Donders as having attributed the cause of astigmatism to be due to the form of the cornea, and he supposed that both Jones and Wilde obtained their information from a small work upon the form of the cornea, published by Gearson, at Gottengen, in 1810.

This brings the history of this anomaly of refraction up to the time of the investigations of Listing and Hemholtz, upon the physiology of vision, but to Prof. Donders is due the honor of calling general attention to the subject, among the eye-specialists of Europe and America. His masterly work upon the accommodation and refraction of the eye, was translated into English, in 1864, by request of the New Sydenham Society. To this work I am indebted mainly for the facts contained in this brief sketch of the history of astigmatism, which I have taken the liberty of introducing into this paper, believing that it would interest this society as it has me to trace the gradual development of our knowledge of the source of one of the most important defects in normal vision.

Astigmatism is frequently congenital, but slight degrees of it may not disturb vision sufficiently to be remarked, until the person affected reaches the age of thirty or forty years. When the power of the eye to accommodate itself to near and distant points becomes weakened, then the astigmatic begins to observe a diminution of clearness of vision, and to notice that the eye becomes easily fatigued by reading or writing. This is markedly the case if such

work is done by a bad light. Good illumination I have found to be a great relief to such persons.

If the astigmatism be of high degree, it manifests disturbance of vision, and distortion of objects at an early age. If sex has any influence, the preponderance of this defect is to be found in males.

All cases of astigmatism have, in one or both of the chief meridians of the eye affected, either myopia (near-sight)—*i. e.* rays from distant objects (parallel rays) are focused in front of the retina—or hypermetropia (far-sight), *i. e.* divergent rays (rays from near objects), if projected, would come to a focus behind the retina. If the refractive power in one meridian only is abnormal, we have a case of simple astigmatism, which will require for correction a concave cylindrical glass, if the abnormal refraction be myopic, or a convex cylindrical lens if it be hypermetropic. If it be a case of compound astigmatism, it requires a spherical and a cylindrical lens combined, and these glasses will be either negative (concave), or positive (convex), accordingly as the astigmatism is either myopic or hypermetropic.

In the treatment of mixed astigmatism, a convex and a concave cylindrical lens are combined, their axis being at right angles.

A cylindrical lens differs from the ordinary spherical glasses in this way: The former is a segment of a cylinder, and refracts the rays of light which pass through it in a plane at right angles to the axis of the glass, and those rays which pass through its axis are not bent, but pass on in straight lines to the eye, while the spherical glasses refract equally the rays which strike any part of its surface.

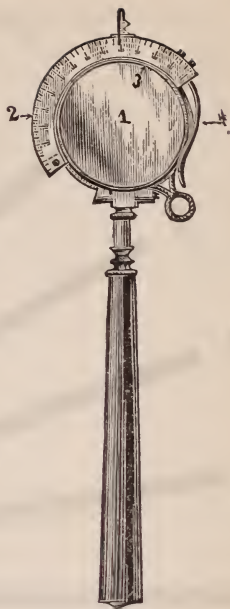
For holding the trial glasses when testing for astigmatism, perhaps Nachet spectacle frames are best; but as they are only suited for glasses with frames, and moreover are not easily procured in this country, I have had constructed by the skillful surgical instrument-maker, Mr. Antenrieth, No. 71 West Sixth street, Cincinnati, an apparatus to which any of the glasses contained in trial cases can be easily adapted. As only one eye can be tested at a time, it is intended to be held by its handle, either by the patient or physician; by this means much greater facility in changing the lenses is obtained over Nachet or the German frames which have to be removed from the head in changing the glasses. With my apparatus, also, the patient is not disturbed by the weight and discomfort of which many patients, particularly ladies, complain in

wearing the Nacet frames. Another point of advantage is the marking of the degrees, the inner numbers correspond with those upon the Nacet frame, while the outer mark the angle when at the vertical point at which the axis of the glass must be set in spectacle frames by the optician. As in the Nacet apparatus, the cylindrical glass may be turned before the eye to any angle, the inner circle may hold at the same time a spherical glass. It is important before taking the angle, that the handle of the instrument be perpendicular to the horizontal meridian of the eye.

Methods of determining astigmatism.—

These are too numerous to mention in detail here; but for practical purposes, the plates of Becker or Snellen are sufficient. The former consist of short bars or stripes, arranged three in a group, in a circle, having three horizontal bars in the center. See Snellen's plate, which must be placed at a distance of fifteen to twenty feet from the eye for testing purposes.

Dr. Green's plates* are recommended by Solberg Wells. They embrace the principle given in the plates of Becker and Snellen. Either of these plates have numbers at the top of each bar or stripe which marks the angle. If all the lines are distinct and sharply defined, the eye is not astigmatic; but if one or more lines in one meridian are distinct, and the other dim, astigmatism is proved, and the direction of the line most distinct corresponds to the meridian of the highest refraction. Furnished with a case of trial glasses, we find the weakest concave or strongest convex cylindrical lens which causes all the stripes to be equally bright and distinct. This is generally the correct glass. In compound astigmatism the excess of myopia or hypermetropia must first be neutralized by the proper spherical glass, before adjusting the cylindrical lens.



1. Cylindrical lens.
2. Scale for marking angle,
3. Groove for spherical glass.
4. Spring for holding glasses.

* Dr. Green, of St. Louis, Mo.



Test-circle, for determining the direction of the principal meridians of astigmatism; the maximum and minimum of curvature. (Snellen.)

Ordinarily, this method is sufficient to arrive at the degree of astigmatism, and the proper angle at which the glass must be set for correction. But many patients can not determine, with sufficient exactness the most distinct line, even when the accommodation is paralyzed, and then it becomes necessary for the physician to resort to other methods or to note the angle (by repeated trial), as marked on the graduated scale attached to the frame which gives the sharpest vision for distance. The slightest variation from the correct angle in high degrees of astigmatism will considerably affect the sharpness of vision.

ILLUSTRATIVE CASES FROM CLINICAL MEMORANDA.

CASE I. *Simple astigmatism.*

T. W., a law student, aged 22, called upon me (June 2d) ten days ago. *History*: Had trouble with his eyes for two or three years past, pain on reading any length of time, and dimness of vision. At first this was noticed only at night, and afterward both day and night. This gentleman visited me in September, 1873, on his way to college. He complained of weak eyes, and thought I might give him something to strengthen them. The eyes were not inflamed, and I at once suspected an error of refraction. Upon trial, we found that neither weak concave nor convex spherical glasses improved his vision; weak cylindrical glasses were but little better. I suggested an examination with the ophthalmoscope. He was, however, in a great hurry and left without further examination, promising to return the same day, if his engagements would permit.

He did not return, as he was anxious to have the company of a young friend to college, who could not wait. During the succeeding year he suffered considerably with his eyes, and his studies were on this account much interrupted. He finally consulted an oculist, who suspected astigmatism and made the attempt to prove the degree, but owing to the fact that both weak and strong spherical glasses did not materially improve vision even when held in front of a stenopæic slit, the physician concluded that rest and blue or smoked glasses would be the proper treatment for him. Under his advice Mr. W. refrained from resuming his place at college for the next session. For the past year he has faithfully obeyed instructions, abstaining from reading as much as it was possible for him to do; he has been having a friend to read to him daily in order to save his eyes. He still has considerable ir-

ritability in both eyes, and they are very sensitive to strong light, although not inflamed.

With this brief history we will proceed to give from the notes of this case our plan of investigation. At 15' (feet) the vertical bars and those at a slight angle from the vertical, upon Becker's plate, were distinct, while those perpendicular to them were dim. At 20' he reads with the left eye the fourth line from the bottom of Snellen's test types. The letters, however, are distorted. In the left eye we therefore record S. (sight) = $\frac{20}{50} = 2.5$ ths, $\frac{20}{50}$ being considered normal vision.

At the same distance, he reads with the right eye, the third line from the bottom. Therefore, of this eye S. = $\frac{20}{40} = \frac{1}{2}$. Concave and convex spherical glasses were now tried before each eye. A concave lens of 36" focus improved vision slightly, but stronger concaves diminished it; with convex glasses he could see nothing.

The steneopaic apparatus was now tried with the slit in the diaphragm horizontal; he could now read the second line from the bottom of the test type. With the slit vertical, his sight was not nearly so good as without it; — 36" was given him to hold in front of the slit, and he was requested to turn them together slowly before the eye until the best point was found. This, at the proper angle, improved vision, but stronger glasses revolved in the same way made no improvement. Our patient now complained of fatigue of that eye, and proposed to change the examination to the other. From the extreme sensitiveness of this eye, we feared a complication with disease of the retina or optic nerve, and decided before going further with our test-glasses to make an *ophthalmoscopic examination*. By this means we found that the optic discs of both eyes were hyperæmic; the left much more so than the right. By the erect image the blood-vessels running vertically were distinct, the horizontal vessels small and not easily discerned. The optic disc was elongated vertically. I may say here that I am aware that "Dr. Hays shows that this is not uniformly true," and has demonstrated that the elongations of the optic disc in the vertical or horizontal direction is not a proof of astigmatism, but is the result of the distance at which the object lens is held from the eye.*

I am prepared to admit the truth of the latter part of the above statement; but in cases of astigmatism I have observed a distortion

* Transactions American Ophthalmological Society, 1870, p. 86.

of the disc when the field was accurately in focus, and that this is not due to slight regular astigmatism in my own eyes, is proved by the fact that no such distortion is observed in the examination of normal eyes, provided the field is plainly in focus. But to return to our patient. The ophthalmoscopic examination did not reveal any sufficient cause for amblyopia, but confirmed the correctness of my diagnosis, that the source of the defect in vision was due to astigmatism. In order to get rid of any error which might have been produced by the active accommodation of the eye, we dilated the pupil with a strong solution of atropia sul. The stenopæic slit was now held horizontally before the left eye; and his vision rose to $\frac{2}{40} = \frac{1}{2}$. A concave lens of 12-inch focus was held in front of the vertical slit, which greatly improved his sight. He could now read the second line from the bottom, S. = $\frac{2}{30}$. With a concave glass of 7" focus his vision was best. This glass, axis nearly horizontal, corrected the astigmatism. All the bars upon Becker's plate were equally bright, and he read with ease No. 30 of the test type at twenty feet; — $\frac{1}{60}$ S. added, made the type blacker, but did not enable him to read the lowest line; — $\frac{1}{72}$ S. was better. We had now proved a high degree of myopia in the vertical meridian of the left eye, with so small amount in the horizontal meridian as to make it practically of little account. The examination of the right eye was now simplified, as we found that with the same glass—7" C. axes horizontal, his vision rose to $\frac{2}{20}$ nearly. Spherical minus and plus glasses added were no improvement. We therefore recorded myopia in the vertical meridian of the right eye = $\frac{1}{7}$, and in the horizontal meridian, emetropia (*i. e.* normal refraction.)

Concave cylindrical glasses of 7" focus were ordered for both eyes. With these he sees in good illumination No. 20 of Snellen's type at 20' (feet), and can read with the same glasses $1\frac{1}{2}$ Snellen at 12 inches. He was, of course, delighted that he had found a remedy for his trouble, and that he could resume his studies without the fear of doing serious injury to his eyes.

The above may be considered an illustrative case for thousands of others.

CASE II. *Compound myopic astigmatism.* June 2d, the same day as the case just mentioned, Dr. L. B. consulted me for a defect in the vision of both eyes. History: Age 38, married; seven or eight years ago first noticed trouble with my eyes; was not able to see small objects distinctly; noticed that letters were distorted, and

straight vertical lines were curved; lamps were sometimes seen double, and the outlines of small objects were hazy; the left eye often became inflamed and painful; some five or six years since he consulted an eye-specialist, who made several examinations, but did not suggest a remedy for his trouble.

Astigmatism in this case was probably overlooked by the doctor, as it has been frequently by other reputable men.

Upon an examination, we found for the left eye in the horizontal meridian myopia of $\frac{1}{24}$; in the vertical meridian, myopia of $\frac{1}{60}$. We therefore had, for the whole eye, myopia = $\frac{1}{60} + A. M. \frac{1}{36}$. In the right eye, we found myopia of $\frac{1}{60} + A. M. \frac{1}{60}$. For the left eye, with a concave cylindrical lens of $\frac{1}{36}''$, combined with a spherical concave glass of $\frac{1}{60}''$, his sight for distance was $\frac{2}{3} \frac{0}{0}$ (normal version). For the right eye, $-\frac{1}{60}''$ C. and $-\frac{1}{60}''$ S. combined, gave him normal sight. For reading at twelve to eighteen inches, he could see best with C. glasses, uncombined. As he did not wish to get two pair, we ordered the latter for both purposes. We have in the above case the evidence that even slight degrees of astigmatism often seriously disturbs vision. This gentleman was enthusiastic over the benefits derived by the glasses, and was impatient at the delay necessary to have the glasses ground and set in frames by the optician. He said that the proper diagnosis of his case had removed the apprehension of future blindness—a calamity great enough in itself, but the more fearful to him on account of his large family, who were entirely dependent upon him for support.

CASE III. *Simple hypermetropic astigmatism.* (Hypermetropia in one meridian, and emetropia—normal vision—in the other.) J. J. applied to me in June, 1874; his history was not taken, but my notes show that his vision for both eyes was $\frac{2}{3} \frac{0}{0} = \frac{2}{3}$, and with convex cylindrical glasses of 36'' focus, sight in each eye rose to normal vision.

We have heretofore stated in this paper that astigmatism was generally congenital; it is also often hereditary, and may occur in several members of the same family.

CASE IV. In July, 1874, Mr. E. B., editor, applied to me for advice about his eyes; had suffered with them from boyhood; he could not read long without closing one eye; the right was his best eye; had tried a variety of spectacles without benefit. An examination revealed simple myopic astigmatism in the right eye, and compound myopic astigmatism in the left. In this case, as in

several others, we found that fitting both eyes with plano-cylindrical glasses was preferable to giving one eye this sort of glass for correction of the simple astigmatism, and a spherico-cylindrical glass for the other eye affected with the compound form. With his reading-glasses, which we prescribed, he could read the smallest type of Snellen at twelve inches, and could see also very well with the same glasses for distance.

CASE V. *Astigmatism complicated with lamellar cataracts.* Mr. C. B., brother of the gentleman whose case we have just given above, visited me in July, 1874. He had been informed that he would be blind in a few months, and that there was no help for him, to use his own language. He was consequently much dejected, and came in fear and trembling to ask my opinion of his case. He had made up his mind to submit with what resignation he could to his fate. When his brother had been fitted with glasses, he concluded to seek further advice. He was a type-setter in the office of his brother, but had been compelled to give up work on account of his failing vision. *History:* At ten years of age he had convulsions, and since that time his vision has been imperfect. He often had a sense of fatigue about the eyes. The outlines of objects were hazy and indistinct. For the last six months his sight had failed considerably, and for the last month he has not been able to set fine type. The eyes were not inflamed; and, as he was still a young man (about twenty-four years of age), I did not suspect cataract, but thought the case to be either an error of refraction or amblyopia. Convex and concave spherical glasses made the sight worse. He reads two and a half Snellen at six inches, and three and a half at eighteen inches; the near point for the same type was five inches.

With the stenopæic apparatus, armed with convex spherical glasses, we found in the vertical principal meridian, hypermetropia of $\frac{1}{16}$; in the horizontal principal meridian H. of $\frac{1}{30}$. This would give us H. $\frac{1}{30} +$ A. H. $\frac{1}{20}$ nearly. The degree was about the same in each eye; and he should have received ordinarily a convex spherical glass of $\frac{1}{30}$ ", combined with a $\frac{1}{20}$ " C. In fact, however, he could see best with each eye when armed with $\frac{1}{16}$ " C. glasses. We now examined the eye with the ophthalmoscope, and then discovered the lamellar or zonular opacity in the crystalline lens of both eyes. The fundus of the eye could be plainly discerned, and its details quite accurately made out. Without glasses,

his sight for distance was $\frac{2}{3} = \frac{2}{3}$ for each eye. With the cylindrical glasses, his sight was $\frac{2}{3}$ or $\frac{2}{3}$. He was furnished with these glasses, and informed that as long as the opacity did not extend toward the periphery of the lens, his sight would remain good in all probability by the aid of his glasses, but we could give him no positive assurance that the cataracts might not be further developed, thereby shutting off all practical vision. In the above case, abnormal regular, as well as irregular astigmatism, caused by a change in the structure of the crystalline lens, probably exceeded regular astigmatism of the cornea. As lamellar cataracts are either stationary or slowly progressive, it will be a great benefit conferred upon persons thus afflicted if we can even for a few months restore useful vision, before resorting to iridectomy, iridodesis, or an operation for the extraction of the cataracts. While many, provided it be found that abnormal astigmatism generally exists in these cases, may be able to wear the glasses with benefit for a lifetime. As far as I can find, the experiment of using cylindrical glasses for the improvement of vision in cases having lamellar or zonular cataracts, is entirely new.

Mixed Astigmatism.—In this form we have myopia in one principal meridian and hypermetropia in the other.

CASE VI. M. B., a sister of charity, was fitted by me some three or four years ago with cylindrical glasses, which at the time vastly improved her vision. Owing to some accident to the glasses, she came to be refitted in August, 1874. From my notes, I find that she had often had much trouble with her eyes before she got her glasses; her eyes at times had been inflamed, and she had from childhood great difficulty in seeing clearly. In reading, the letters run together, and she had acquired the habit of holding the book very close to get rid of the diffuse and hazy outlines of the letters. By methods already stated, we found in the left eye, in the vertical principal meridian, myopia of $\frac{1}{2}$, and in the horizontal meridian, hypermetropia of $\frac{1}{4}$, and for the right eye, myopia in the vertical of $\frac{1}{3}$, and in the horizontal, hypermetropia of $\frac{1}{8}$. Bi-cylindrical glasses were therefore ordered, the axis of the concave cylinder to correspond with the hypermetropic meridian, and the axis of the convex cylindrical lens to be in the plane of the vertical or myopic meridian, the axis of both glasses to be set at right angles. Without the glasses for R. E., $S. = \frac{2}{3} = \frac{2}{3}$; and in the L. E., $S. = \frac{2}{3} = \frac{1}{2}$. Now this eye was evidently amblyopic. With the crossed C. lenses

for R. E., S. = $\frac{2}{3}\%$ nearly; for L. E., S. = $\frac{2}{4}\% = \frac{1}{2}$. She could also read the finest of Snellen's test type, at twelve inches, using both eyes.

If I have been somewhat tedious to the eye-specialist in my relation of cases, I hope that the object of my paper—viz., to call attention to this important and interesting subject, and to induce among the *general profession* further investigation and increased knowledge of an anomaly in refraction, which can not be relieved by the glasses ordinarily to be found at opticians—will excuse what may otherwise appear as unnecessary minuteness of detail.

Any lover of art who has visited the national gallery at London, must have been astonished with the difference between the earlier paintings of Turner, the great English landscape painter, and those executed by him later in life. The latter have the appearance of having been done in a hurry, presenting a vagueness in outline, and a confusion of detail inexplicable to all who do not understand the secret of this wonderful decline in conception or skill in execution of the works of the great artist. Some persons have attributed the change to the effects of a diseased mental and physical condition, and others not so charitable, said the eminent painter had become avaricious and used both cheap paints and indiscreet haste in his work. But Liebreich, the distinguished oculist to St. Thomas' Hospital, London, stated in a lecture, at which I was present, that it was quite evident to him that Turner's eyes had become impaired in vision by reason of astigmatism. Had the discovery of Dr. Young been properly appreciated, the lustre of Turner's fame might have remained untarnished, and probably his last efforts would have been his greatest and best works.

Within the last two centuries, the improvements made in astronomical instruments have enabled astronomers to discover new worlds, to fix the orbits of planets—nay, more, to look into those worlds, see mountains, and by means of spectrum analysis to ascertain even the composition of their atmospheres. Yet for ages, the wonderful organ which enabled us to learn something of the planetary system located in space millions of miles from our earth, was comparatively little understood. When Galileo at Padua, in 1609, constructed his first telescope "with a lead tube and two spectacle glasses," he in triumph hurried with it to Venice, where the "magical toy" excited the greatest enthusiasm. At the request of the doge, he presented his extraordinary instrument to the senate, who rewarded him by "conferring upon him for life his professorship at Padua, and generously raising his salary from 520

to 1,000 florins.”* The discovery and practical demonstration of the anomaly in refraction since called astigmatism, conferred as great a boon upon mankind in my opinion as the invention of a telescope by Galileo. Parliament did not vote Dr. Young an annuity, however, nor even give recognition to his brilliant discovery.

How to use the Vaginal Douche.—Dr. Lombe Atthill gives the following directions:

“To use the vaginal douche efficiently, it is necessary that the hips be raised higher than the shoulders, so that the vagina may be distended with the fluid; that the stream of fluid should be continuous, and that it should be kept up to an equal temperature. In a case of metritis, where the temperature of the water was raised to 110° , the patient derived much benefit. In another, a case of vaginitis, the patient had been subjected previously to treatment of various kinds without benefit. Two gallons of water, temperature 105° , were used twice daily, with the best effect.”

Antidote to Carbolic Acid.—Huseman has shown by experiment, that the alkalies and earths are the best antidotes to carbolic acid, whilst the fixed oils, glycerine, etc., are inoperative. The best agent he found to be saccharate of lime, obtained by the solution of sixteen parts of sugar in forty parts of water, and the addition of five parts of caustic lime. The mixture should be allowed to digest for three days, with occasional agitation, then filtered and evaporated to dryness. The product is readily soluble in water. (*Der Praktische Arzt*, Jahrg. xv., No. 9).—*Practitioner*.

* Lives of Eminent Literary and Scientific Men of Italy, p. 26.

Scarlet Fever in the United States.

A Study of the Mortality Statistics of the Ninth Census, including an inquiry as to the seeming effect of Geographical Position, Temperature, and Altitude on the Disease. By THOMAS C. MINOR, M.D., Cincinnati, Ohio.

[CONTINUED.]

The total number of blacks dying of scarlet fever in the Southern States was 107, out of a total black population of 3,713,327, so that one out of every 34,704 of the aggregate black population died of scarlatina. The total number of whites dying of scarlet fever was 446, out of a total white population of 4,811,962; so that one out of every 10,790 of aggregate white population died of scarlatina. It will be at once noticed that the disease is *much more frequent among the whites than among the colored population*. During epidemics the whites have seemed to be the sufferers, and there is reason to believe that there is a certain immunity from epidemic scarlatina existing among the negroes of the South.

We now turn our attention to the Western States, commencing with Ohio.

OHIO.—Total deaths from scarlatina, census year of 1870, were 552. Of these, 255 were males, 297 were females; 353 of the decedents were under five years of age. The season of greatest mortality was spring; the month of greatest mortality was March. The maximum and minimum temperature the month of greatest mortality was 45° and 36° Fahr. Average altitude of State above the level of the sea, 700 feet.

Reflections.—Total population in 1870 was 2,665,269. Of this number, 375,412 were under five years of age; so that out of every 1,064 of the population under five years of age, one died of scarlatina. Three only of the decedents were colored. The month of greatest mortality was in cool weather. Epidemics of scarlet fever have occurred from time to time in Ohio. According to the illustrious Dr. Daniel Drake, of Cincinnati,* "A malignant form of scarlatina seems to have invaded the first settlers of Kentucky and Ohio, concerning which, however, but little is now known. Even the exact period can not be stated, but it was between 1791 and 1793. In Kentucky, where it was extremely fatal, it was universally called "putrid sore throat," as it was probably unattended with much efflorescence. At Marietta and Belpre, the oldest settlements of the State of Ohio, it was most dreadfully destructive

* Principal Diseases of the Interior Valley of North America. By Daniel Drake, M.D., 1854, p. 594.

among children and young persons. From the time of this epidemic until the year 1808, I do not know that any scarlatina appeared in the valley of the Ohio. In that year cases of the anginose variety began to show themselves in Cincinnati, and the disease prevailed more or less for two or three years." Dr. Drake then mentions the following epidemics: Mariotta, 1824; Paris, Kentucky, 1821; in southwestern Ohio from 1828 to 1833; Greene county, Ohio, 1838-39-40; Calloway county, Kentucky, 1838. These epidemics have been fully described by Drs. Hildreth, Carroll, Dawson, and Lawrie, and the bibliographical references to the same are given by Dr. Drake. As early as 1822,* Dr. Drake mentions an epidemic of scarlatina that occurred in the West about the year 1810, although he does not speak of this in his book. In addition to these epidemics mentioned by Dr. Drake, I have found references to several others. Dr. George Branch describes an epidemic in Montgomery county, Ohio.† Dr. Judkins speaks of the disease raging as a severe epidemic at Steubenville, in January and March, 1832.‡ Dr. H. G. Carey, of Dayton, says: "Scarlet fever prevailed in Montgomery county, for the first time, in 1831."||

Dr. E. Williams, Barnsville, Belmont county, mentions an epidemic at Belmont in the early part of 1851.§

At Wadsworth, there was an epidemic in November, 1846.¶

Dr. Chas. Cochran describes an epidemic occurring at Toledo, in 1854.**

According to Dr. Silas Reed, scarlatina first appeared in Portage county in December, 1830.††

Dr. Conant describes the disease as it appeared at Windham, in Northeastern Ohio.‡‡

Dr. R. R. Means, of Sandusky, states: "Scarlatina made its first appearance; for the first time in this place, as an epidemic, in 1841."|||

* Western Quarterly Journal, Vol. I., p. 308. Cincinnati, September 1, 1822.

† Western Medical Journal, Cincinnati, 1833, p. 371.

‡ Observations on Scarlet Fever, as it appeared at Steubenville. Ib. p. 494.

§ Transactions American Medical Association, Vol. VII., p. 317.

¶ Trans. Amer. Med. Association, 1854, p. 353.

¶ American Journal Medical Sciences, 1847, p. 127.

** Cincinnati LANCET AND OBSERVER, Vol. VII, p. 577.

†† Western Journal of Medicine, Cincinnati, 1834, p. 8.

‡‡ Western Journal of Medicine, Vol. XXV, p. 23.

||| Transactions Ohio State Medical Society, 1857, p. 159.

It will be at once seen that the disease is a not unfrequent visitor in Ohio; in the meantime, the scarlatina mortality figures in the principal cities of the State are interesting to the medical statistician.

At Toledo, Lucas County, the deaths from scarlatina, from 1867 to 1873, were as follows :*

YEAR.	DEATHS.
1867.....	1
1868.....	1
1869.....	2
1870.....	86 (Epidemic year,)
1871.....	16
1872.....	1
<hr/>	
Total.....	107

Population of Toledo, in 1870, was 31,584.

At Dayton, Montgomery county, the deaths from scarlet fever, for seven years, ending February 28, 1874, were as follows :

YEAR.	DEATHS.
1868.....	1
1869.....	1
1870.....	24
1871.....	6
1872.....	23
1873.....	11
1874.....	12
<hr/>	
Total.....	78

Population of Dayton, in 1870, was 30,473.†

At Cleveland, in Cuyahoga county, no regular registration of deaths was kept, until September 20, 1873. Through the kindness of Dr. H. W. Kitchen, Health Officer, I have been favored with the following table of mortality from scarlatina for the twelve months ending August, 1874. The population of Cleveland, in 1870, was 92,829. The disease seems to have prevailed as an epidemic in the year 1874 :

* Health Reports of Toledo, Ohio, 1868-1873. Dr. S. W. Skinner, Health Officer.

† Seventh Annual Report Board of Health of Dayton, Ohio, 1874, p. 16, Dr. Thomas L. Neal, Health Officer.

MONTHS.		DEATHS.	MONTHS.		DEATHS.
1873.	September.....	3	1874.	March.....	11
	October.....	12		April.....	12
	November.....	10		May.....	8
	December.....	15		June.....	10
1874.	January.....	36		July.....	11
	February.....	12		August.....	6
Total.....		146			

The following table shows the number of deaths registered from scarlatina in this city (Cincinnati, Hamilton county), since the organization of the present board of health, in April, 1867:

YEAR.		DEATHS.
	1867-1868.....	17
	1868-1869.....	93 (Small-pox epidemic yr.)
	1869-1870.....	13
	1871.....	16
Year ending February 29,	1872.....	48
10 months ending December 31,	1872.....	33
	1873.....	410 (Cholera epidemic year.)
	1874.....	687
Total.....		1,317

Dr. J. J. Quinn, Health Officer of Cincinnati, writing of the year 1873, states:* "No month was exempt from *scarlet fever*, although there were only 15 deaths from the disease during the first four months of the year. Only 1 of these occurred in April. After that, the deaths from scarlet fever increased each month, until there were, from it, 113 deaths in November. 108 died from the same disease in December. The total deaths during the year from this cause were 410."

KENTUCKY.—Total deaths from scarlatina, in 1870, were 80. Males, 42; females, 38. Of the decedents, 61 were under five years of age. Season of greatest mortality, Autumn. No particular month seems to have been marked by any great mortality. The average altitude of the State above the level of the sea is 600 feet.

Reflections.—Total population, 1,321,011. Of these, 209,990 were under five years of age. So that out of every 3,443 of the population under five years of age, one died of scarlatina. Epidemics of scarlatina have occurred in the State at long intervals of time. (Refer to Drake.) 9 of the decedents were colored.

TENNESSEE.—Total deaths from scarlatina, in 1870, were 29. Males, 16; females, 13. Of these, 24 were under five years of age.

* Seventh Annual Report Board of Health of Cincinnati, Ohio, 1873, p. 33.

Season of greatest mortality, spring. Month of greatest mortality, March. Maximum and minimum temperature 55° and 47° Fahr. Average altitude of the State above the level of the sea, 600 feet.

Reflections.—Total population, in 1870, was 1,258,520. Of these, 200,595 were under five years of age. So that out of every 8,359 of the population under five years of age, one died of scarlatina. 4 of the decedents were colored. Epidemics of scarlatina have occurred in Tennessee at times.

Dr. George R. Grant, of Memphis, remarks of scarlet fever, "In Memphis, this disease is seldom met with; and I feel pretty confident that, on full investigation, a similar exception would constitute the rule in other places noted for the prevalence of *malarious* fevers."*

Dr. R. Sneed gives an account of an epidemic occurring at Strawberry Plains, and mentions one at Knoxville.†

Dr. James M. Bell, of Versailles, speaking of an epidemic in that town: "It first made its appearance about the first of January, 1854.‡

It is occasionally seen at Nashville. Under date of October, 1874, Dr. J. W. Morton, Health Officer of Nashville, writes me: "Five deaths from scarlet fever have been reported at this office since its establishment on the first of July last."

WEST VIRGINIA.—Total deaths from scarlatina, in 1870, were 157. Males, 88; females, 69. Of these decedents, 106 were under five years of age. Season of greatest mortality was spring. Month of greatest mortality was March. Temperature, month of greatest mortality, 45° Fahr. Average altitude of the State above the level of the sea, 1,050 feet.

Reflections.—Population of State, in 1870, was 442,014. Of this number, 72,722 were under five years of age. So that out of every 687 of the population under five years of age, one died of scarlatina. 4 of the decedents were colored. Epidemics of scarlatina occur from time to time in West Virginia. Dr. W. P. Ewing, Health Officer of Charlestown, in a communication dated October, 1874, informs me that "there has not, however, been an epidemic, or even a sporadic case of scarlet fever, in Charlestown, since the beginning of the year 1870."

* Trans-American Medical Association, Vol. VII, 1854, p. 97.

† Nashville Journal of Medicine, Vol. VI, p. 211.

‡ Nashville Journal of Medicine, Vol. VIII, p. 367.

Dr. S. L. Jepson, Health Officer of Wheeling, writes me that there were no deaths from scarlatina in Wheeling during the year 1873; but says (October, 1874): "We have a few cases here now, and some rather malignant ones."

MICHIGAN.—Total deaths from scarlatina, in 1870, 707. Males 345; female, 362. Of the decedents, 460 were under five years to age. The season of greatest mortality was spring. The month of greatest mortality was March. The maximum and minimum temperature, month of greatest mortality, was 28° and 22° Fahr. The average altitude of the State above the level of the sea is 800 feet.

Reflections.—Total population of Michigan, in 1870, was 1,184,059. Of this number, 164,202 were under five years of age. So that out of every 357 of the population under five years of age, one died of scarlatina. 6 of the decedents were colored. The weather, month of greatest mortality, was cold. Epidemics of scarlatina have occurred from time to time. Dr. F. K. Bailey, of Lampeer county, mentions an epidemic of scarlatina occurring in the spring of 1844.*

WISCONSIN.—Total deaths, in 1870, from scarlatina, 1,016. Males, 512; females, 504. Of the decedents, 672 were under five years of age. The season of greatest mortality was spring. The month of greatest mortality was March. The maximum and minimum temperature, month of greatest mortality was 34° and 31° Fahr. Average altitude of the State above the level of the sea, 850 feet.

Reflections.—Total population, in 1870, was 1,054,670. Of this number, 157,090, were under five years of age. So that out of every 234 of the population under five years of age, one died of scarlatina. All the decedents were whites. The weather, month of greatest mortality, was cold. Epidemics of scarlatina occur from time to time. At Milwaukee, a slight epidemic tendency was noticeable in 1873. 69 deaths are reported in that year.†

INDIANA.—Total deaths from scarlatina, in 1870, were 353. Males, 190; females, 163. Of the decedents, 235 were under five years of age. The season of greatest mortality was spring. The month of greatest mortality, March. The temperature, month of greatest mortality, averaged about 38° Fahr. The average altitude of the State above the level of the sea is 675 feet.

Reflections.—Population, in 1870, was 1,686,637. Of this num-

* Transactions American Medical Association, Vol. XII. p. 199.

† Seventh Annual Report Board of Health of Milwaukee, 1874, p. 17. Dr. James Johnson, Health Officer.

ber, 253,306 were under five years of age. So that out of every 1,078 of the population under five years of age, one died of scarlatina. All the decedents were white. The weather, month of greatest mortality, was cold.

ILLINOIS.—Total deaths from scarlatina, in 1870, were 2,162. Males, 1,224; females, 1,038. Of the decedents, 1,418 were under five years of age. Season of greatest mortality was spring. Month of greatest mortality was March. Maximum and minimum temperature, month of greatest mortality, 39° and 32° Fahr. Average altitude of the State above the level of the sea, 625 feet.

Reflections.—Population of State, in 1870, was 2,539,891. Of this number, 390,803 were under five years of age. So that out of every 276 of the population under five years of age, one died of scarlatina. The weather, month of greatest mortality, was cold. 11 of the decedents were colored. Epidemics of scarlatina occur from time to time. "According to the mortality reports of 1860, the percentage of deaths in Illinois is 8.80, which is an average of all states." Dr. Hewin, of Iroquois county, reports epidemics in 1864 and 1865.*

At Chicago, in 1870, there were 305 deaths from scarlatina. The great fire, in 1871, destroyed the records of the Chicago Health Office, on October 9. From the *imperfect records* of that year, we notice 124 deaths from scarlatina. There were probably many more deaths from the disease. In 1872, there were 128 deaths from scarlatina. In 1873, there were 115 deaths from the disease.†

Dr. Francis Drude, Health Officer of Quincy, in a communication dated October, 1874, says: "As regards scarlet fever, I have found only 3 cases in the mortuary record—1 on April 26, 1870; 1 on October 16, 1870; 1 on June 11, 1872. I have reason to doubt any of the above cases being genuine scarlatina, since we have not had any epidemic of it for the last fifteen years."

The population of Quincy, in 1870, was 24,052.

At Peoria, there were no deaths from scarlet fever in 1872; only 1 death from the disease in 1873; and no deaths from this cause in 1874.‡

MISSOURI.—Total deaths from scarlatina, in 1870, were 1,049. Males, 524; females, 525. Of the decedents, 728 were under five

* Transactions American Medical Association, Vol. XVIII, p. 179.

† Report of the Board of Health of Chicago, for the years 1870–1873. Dr. Ben C. Miller, Sanitary Superintendent.

‡ Vital Statistics of Peoria, Ill., by Dr. John N. Niglas, Health Officer.

years of age. The season of greatest mortality was winter. The month of greatest mortality was February. The maximum and minimum temperature, the month of greatest mortality was 26° and 17° Fahr. Average altitude of the State above the level of the sea, 800 feet.

Reflections.—Total population, in 1870, was 1,721,295. Of this number, 276,362 were under five years of age. So that out of every 380 of the population under five years of age, one died of scarlatina. 18 of the decedents were colored. The weather, month of greatest mortality, was cold. The deaths at St. Louis from scarlatina, in 1872, were 47; in 1873, there were 22 deaths from the disease.*

ARKANSAS.—Total deaths from scarlatina, 16. Males, 9; females 7. Of the decedents, 13 were under five years of age. Season of greatest mortality, spring. Average altitude of the State above the level of the sea is 300 feet.

Reflections.—Total population, in 1870, was 484,471. Of this number, 82,164 were under five years of age. So that out of every 6,321 of the population under five years of age, one died of scarlatina. All of the decedents were whites. Epidemics of scarlatina occur at times in the State. Dr. George W. Lawrence, of Hot Springs, says: "I know of no other febrile disorder worth mentioning visiting this section, than scarlatina. About the years 1849 and 1850, it appeared in Camden as an epidemic. In many cases, it assumed a malignant form, and was attended with very great fatality. Ten years later, it again made its appearance, but in the simple form, and I do not remember a fatal case of it."†

KANSAS.—Total deaths from scarlatina, in 1870, were 354. Males, 158; females, 196. Of the decedents, 229 were under five years of age. The season of greatest mortality was spring. The month of greatest mortality was May. The maximum and minimum temperature, month of greatest mortality, was 66° and 63° Fahr. The average altitude of the State above the level of the sea is 1,350 feet.

Reflections.—Total population of State, in 1870, was 364,399. Of this number, 59,446 were under five years of age. So that out of every 260 of the population under five years of age, one died of

* Sixth and Seventh Annual Reports Board of Health of St. Louis. Dr. G. F. Dudley, Health Officer.

† Transactions American Medical Association, Vol. XXIII, p. 425.

scarlatina. 18 of the decedents were colored. The weather, month of greatest mortality, was warm.

MINNESOTA.—Total deaths from scarlatina, 238. Males, 129; females, 109. Of the decedents, 143 were under five years of age. The season of greatest mortality was winter. The month of greatest mortality was January. The maximum and minimum temperature, month of greatest mortality, was 13° and 7° Fahr. The average altitude of the State above the level of the sea is 1,100 feet.

Reflections.—Total population, in 1870, was 439,706. Of this number, 70,981 were under five years of age. So that out of every 497 of the population under five years of age, one died of scarlatina. All the decedents were white. The weather, month of greatest mortality, was cold. Epidemics of scarlatina occur from time to time. Dr. Charles N. Hewitt, of Red Wing, says: "Twice epidemics, during the past year, in St. Paul; very mild, and few deaths. Also at Stillwater, where 22 cases are reported in Dr. Reiner's practice, none fatal. In Red Wing, it began in September, and still continues at the same time with rubeola. There have been over 300 cases, and very few deaths."*

IOWA.—Total deaths from scarlatina, in 1870, were 325. Males, 156; females, 169. Of the decedents, 228 were under five years of age. The season of greatest mortality was spring. The month of greatest mortality was April. The maximum and minimum temperature, month of greatest mortality, was 56° and 46° Fahr. The average altitude of the State above the level of the sea is 900 feet.

Reflections.—Total population of State, in 1870, was 1,191,702. Of this number, 190,701 were under five years of age. So that out of every 837 of the population under five years of age, one died of scarlatina. 2 of the decedents were colored. The weather, month of greatest mortality, was cool.

NEBRASKA.—Total deaths from scarlatina, 90. Males, 40; females, 50. Of the decedents, 57 were under five years of age. Season of greatest mortality was spring. Month of greatest mortality was March. Maximum and minimum temperature, month of greatest mortality, 33° and 36° Fahr. Average altitude of the State above the level of the sea is, 1,700 feet.

Reflections.—Total population in the State, in 1870, was 122,993.

* Transactions American Medical Association, 1872, p. 464.

Of this number, 19,508 were under five years of age. So that out of every 343 of the population under five years of age, one died of scarlatina. All the decedents were white. The weather, month of greatest mortality, was cool.

NEVADA.—Total deaths from scarlatina, in 1870, were 141. Males, 72; females, 69. Of the decedents, 109 were under five years of age. The season of greatest mortality was winter. The month of greatest mortality was January. Average altitude of the State above the level of the sea, 5,400 feet.

Reflections.—Total population of State, in 1870, was 42,491. Of this number, 3,297 were under five years of age. So that out of every 31 of the population under five years of age, one died of scarlatina. All the decedents were white. The weather, month of greatest mortality, was cold. The aggregate of deaths from all causes, in this State, was 615. From this, it will be seen that *scarlatina was the principal cause of death.*

OREGON.—Total deaths from scarlatina, 16. Males, 12; females, 4. Of the decedents, 12 were under five years of age. The season of greatest mortality was winter. The month of greatest mortality was January. The maximum and minimum temperature, the month of greatest mortality, was 48° and 31° Fahr. The average altitude of the State above the level of the sea is 2,000 feet.

Reflections.—Total population of State, in 1870, was 90,923. Of this number, 13,808 were under five years of age. So that out of every 1,151 of the population under five years of age, one died of scarlatina. All the decedents were white. The weather, month of greatest mortality, was cool.

CALIFORNIA.—Total deaths from scarlatina, 479. Males, 253; females, 226. Of the decedents, 307 were under five years of age. Summer was the season of greatest mortality. June was the month of greatest mortality. The maximum and minimum temperature, the month of greatest mortality, was 56° and 87° Fahr. The average altitude of the State above the level of the sea is 2,500 feet.

Reflections.—Total population of the State, in 1870, was 560,244. Of this number, 68,277 were under five years of age. So that out of every 223 of the population under five years of age, one died of scarlatina. None of the decedents were colored. 2, however, were Chinese. The weather, month of greatest mortality, was warm. Epidemics of scarlatina occur from time to time in the State. At San Francisco, the mortality from scarlatina, for some years back, is as follows:

YEAR.	DEATHS FROM SCARLATINA.
1867-1868.....	13
1868-1869	194
1869-1870.....	157
1870-1871.....	62
1871-1872.....	15
1872-1873.....	33
1873-1874.....	387

Total..... 861

Says Dr. Henry Gibbons, Jr. :* "Isolated cases of scarlatina had occurred from time to time, since the epidemic in 1869-1870; but the mortality had diminished to 15 in 1871-1872, and to 23 in the first eleven months of the fiscal year 1872-1873. The disease then took a new departure, 10 deaths occurring in June, 1873, 14 in July, 15 in August, 26 in September, 43 in October, 59 in November, and 81 in December, when the acme was reached. In January, a rapid diminution to 47 deaths took place, and in subsequent months a remarkable rise and fall in the mortality was observed—as follows: February, 16; March, 31; April, 15; May, 24; June, 16; July, 27. In a large proportion of the cases, physicians, in their certificates of death, described the disease as malignant. Entire families of children were, in several instances, carried off by it; and, in at least one block, a dozen deaths occurred. Two-thirds of the decedents were under five years of age; only 30 exceeded ten years; while 2 were between thirty and forty years old. A singular feature was the preponderance of females over males, the former being ten per cent. in excess."

EN RESUME.—Total deaths from scarlatina, in the western section of the United States, in the census year of 1870, were 7,764. Males, 3,925; females, 3,839. This mortality was distributed through the following months:

MONTH.	DEATHS.	MONTH.	DEATHS.
March	1,095	September.....	377
April.....	823	October.....	441
May.....	748	November.....	533
June.....	472	December.....	628
July.....	445	January.....	816
August.....	457	February.....	929
Total.....		7,764	

* Report of the Health Officer of the City and County of San Francisco, June, 1874, p. 16.

The mortality at the different seasons was as follows: spring, 2,666 deaths; summer, 1,374; autumn, 1,351; winter, 2,373. Almost two-thirds of the entire mortality from scarlatina was, then, in *cold weather*—in the spring and winter months. The season of greatest mortality was spring. The month of greatest mortality was March.

The seeming influence of altitude on the disease may be seen, if the following table be carefully looked at. The mortality in Nevada, having an average altitude of 5,400 feet, is especially noticeable.

STATES.	AVERAGE ALTITUDE.	DEATHS TO THE POPULATION UNDER	DEATHS TO THE AGGREGATE
	FEET.	5 YEARS OF AGE.	POPULATION.
Ohio.....	700	1 to 1,064	1 to 4,829
Kentucky.....	600	1 " 3,443	1 " 16,513
Tennessee.....	600	1 " 8,359	1 " 43,398
West Virginia.....	1,050	1 " 687	1 " 2,816
Michigan.....	800	1 " 357	1 " 1,675
Wisconsin.....	850	1 " 234	1 " 1,039
Indiana.....	675	1 " 1,078	1 " 4,779
Illinois.....	625	1 " 276	1 " 1,175
Missouri.....	800	1 " 380	1 " 1,641
Arkansas.....	300	1 " 6,321	1 " 30,280
Kansas.....	1,350	1 " 260	1 " 1,030
Minnesota.....	1,100	1 " 497	1 " 1,848
Iowa.....	900	1 " 837	1 " 3,667
Nebraska.....	1,700	1 " 343	1 " 1,367
Nevada.....	5,400	1 " 31	1 " 302
Oregon.....	2,000	1 " 1,151	1 " 5,683
California.....	2,500	1 " 223	1 " 1,170

It will be noticed that in Arkansas, having an average altitude of 300 feet, only 1 death occurred to every 30,280 of aggregate population; while, in Ohio, Kentucky, Tennessee, Michigan, Wisconsin, Indiana, Illinois, Missouri, and Iowa, states having average altitudes ranging from 600 to 900 feet, 1 death from scarlatina occurred to every 2,317 of aggregate population, the total aggregate population of the last-named states being 14,533,153, and the total number of decedents from scarlatina, 6,273. In West Virginia, Kansas, Minnesota, Nebraska, Nevada, Oregon, and California, states having average altitudes ranging from 1,050 to 5,400 feet, 1 death from scarlatina occurred to every 1,447 of the aggregate population, the total aggregate population in these states being 2,133,316, and the decedents from scarlatina numbering 1,475. The following proposition can then be made regarding these states:

Altitude in the Western States seems to increase the tendency to scarlatina.

GENERAL RECAPITULATION.—The total number of deaths from scarlatina occurring in the census year of 1870, including those not heretofore enumerated belonging to the various territories, were 20,320. Males, 10,299; females, 10,021. The mortality was distributed according to sex through the following months (refer to pages 208 and 209 of Ninth Census, volume Vital Statistics):

MONTH.	MALES.	FEMALES.
January.....	1,099	1,106
February.....	1,234	1,159
March.....	1,401	1,325
April.....	1,162	1,132
May.....	1,083	1,063
June.....	634	692
July.....	614	602
August.....	574	522
September.....	441	486
October.....	508	492
November.....	675	606
December.....	872	833
Unknown.....	2	3
Total.....	10,299	10,021

The month of March presents the largest showing of deaths, in any one month, of males. The month of March also presents the largest showing of deaths, in any one month, of females. The aggregate of deaths by months is as follows:

January.....	2,205	August.....	1,096
February.....	2,393	September.....	927
March.....	2,726	October.....	1,000
April.....	2,294	November.....	1,281
May.....	2,146	December.....	1,705
June.....	1,326	Unknown.....	5
July.....	1,216		
Total.....			20,320

The deaths, by seasons, may be arranged as follows:

Spring.....	7,166
Summer.....	3,638
Autumn.....	3,208
Winter.....	6,303
Unknown.....	5
Total.....	20,320

Spring was the season of greatest mortality, and autumn the season of least mortality. *Almost two-thirds of the deaths occurred*

in the colder seasons of the year. According to the eighth census, 1860, page 267: "In winter, scarlet fever did 33.88 per cent. of its work, and in spring, 27.85 per cent. The destruction in summer was but half, and in autumn less than two-thirds, of that in winter. March was its most fatal month; January, February, and April nearly the same. In July and August, the mortality was but about half of that of those months; and in the other warm months—June, September, and October—it was in somewhat larger proportions." It is at once noticeable that the conclusions to be drawn from the figures of the census of 1860 coincide almost exactly with those of 1870. In other words, the *colder weather seemed to favorize the scarlatinous tendency.* There seems to be a variance on one point between the scarlatina statistics of Europe and the United States. Thomas, in his superb monograph on scarlatina, page 194, remarks that "the most complete reports concerning the influence of *season* on the prevalence of scarlatina have emanated from England. The greater prevalence of the disease in the fall of the year has been recognized since Sydenham's time. During spring, its decrease is not so decided as in other diseases which prevail with like frequency during this time. Of 55,956 deaths in London from scarlatina, within twenty-four years (up to 1863 inclusive), 17.87 per cent. occurred during spring, 22.75 per cent. during summer, 35.54 per cent. during the fall, and 23.85 per cent. in winter (the latter comprises the last four months of the old and first nine weeks of the new year. In other words, the largest number of deaths from scarlatina occurred between the middle of September and the middle of November; the smallest number, toward the end of March and beginning of April. The greatest number of deaths, however, in the fall of the year were certainly not caused by a greater malignancy of the disease at this season. Similar results are obtained by calculating the deaths which have occurred in all England, according to the different seasons of the year. Other but much smaller data, in our own country (Germany), also indicate the influence of the fall of the year on the spread of scarlatina. . . . The reports of epidemics do not show an aggravation of the disease under the influence of a changeable cold, and moist *weather.* Of course, scarlatina has often prevailed during such weather, but it has not been absent under opposite conditions; and in England especially, it has attained a wide spread during warm weather. The condition of the weather can

therefore be said to exert but moderate influence on the frequency of scarlatina." The census figures of 1860 and 1870, in the United States, show that scarlatina is a disease belonging to the *colder seasons*, and that spring and winter exhibit the greatest mortality from the disease, although there can be no doubt but that slight epidemics sometimes occur in *summer*, but the latter form *rare exceptions, and not the rule*, in this country. The following instances, where late epidemics of scarlatina, in the United States, seemed to have been influenced by temperature, are not without interest. It will be noticed that the mean monthly temperature of the various cities, as given by Blodget, is used; also that the health-office mortality statistics of the different cities spoken of are the mortality figures used.

In Baltimore, January, 1872, to January, 1874:

MONTH.	DEATHS, 1872.	DEATHS, 1873.	MEAN TEMPERATURE. DEGREES.
January	18	7	30.9
February	13	5	33.
March.....	11	12	39.2
April.....	10	12	52.1
May	13	15	60.6
June	3	10	70.9
July	3	9	75.2
August.....	7	5	74.7
September	19	5	66.6
October.....	12	4	54.9
November	13	7	44.3
December	19	24	34.4
Total.....	141	115	

In 1874, the disease seems to have increased; but again July, the month of highest temperature, shows the least mortality from the disease. The figures are up to October, 1874, the month the last health report was issued. It will be noticed that a mean average monthly temperature, varying from 70° to 75° Fabr., seems to have diminished the mortality from the disease, when either a *slight epidemic tendency* prevailed, or the disease manifested itself in a mild form.

In Chicago, January, 1872, to January, 1874:

MONTH.	DEATHS, 1872.	DEATHS, 1873.	MEAN TEMPERATURE. DEGREES.
January	21	14	23.6
February	15	7	24.7
March.....	11	14	32.3

MONTH.	DEATHS, 1872.	DEATHS, 1873.	MEAN TEMPERATURE. DEGREES.
April.....	14	13	46.1
May.....	15	11	56.3
June.....	6	11	62.7
July.....	9	15	70.8
August.....	8	8	68.5
September.....	4	10	60.1
October.....	8	4	48.5
November.....	10	4	37.9
December.....	22	4	29.3
Total.....	143	115	

A *very slight epidemic tendency* is here noticeable, disappearing in October, 1873. The largest number of deaths occurred in winter and spring, the *colder seasons*. It will be noticed, however, in July, a month having an average temperature of 70° Fahr., that, in 1873, there was a very slight increase, followed by a decided decrease in the next hot month of August. The two *warmer seasons*, again, in this case, show that their seeming influence is to diminish the mortality from the disease.

San Francisco, 1873-74, epidemic commencing June, 1873:

MONTH.	DEATHS, 1873-74.	AVERAGE MEAN TEMPERATURE. DEGREES.
1873. June.....	10	58.6
July.....	14	59.8
August.....	15	60.9
September.....	26	61.5
October.....	43	61.7
November.....	59	57.
December.....	81	51.5
1874. January.....	47	50.1
February.....	16	52.9
March.....	31	54.5
April.....	15	58.6
May.....	24	57.8
Total.....	381	

[TO BE CONCLUDED IN OUR NEXT.]

Proceedings of Societies.

PROCEEDINGS OF THE DELAWARE COUNTY MEDICAL SOCIETY.

Reported by F. W. MORRISON, M.D., Secretary.

Dr. C. D. Case read a paper on the "Imagination and its Effects on the Human Body," relating humorous incidents of the "imaginative faculty" in the lower animals, as occurring under his personal observation, stating the "object of impressions and reminiscences of the imagination" is the faculty of mind by which ideas formerly received but forgotten, are recollected or revived in the memory; that remembrance implies that an idea occurs to the mind spontaneously, or without much mental exertion; that reminiscence implies the act of recalling ideas which do not spontaneously occur; that the imagination, not satisfied with following the order prescribed by nature or suggested by accident, selects the parts of different conceptions to form a whole, more pleasing or more terrible than has ever been presented in the ordinary course of nature; that remembrance and reminiscence may be compared to shapeless stones as they exist in the quarry, which require little more than mechanics' labor to convert them into common dwellings, but under the imagination of an architectural genius, resolves into temples and palaces. The paper contained numerous illustrations, incidents, comparisons, and references. The paper was discussed by Drs. Welch, Hyatt, McIntire, Hills, Little, and Potter, in which mental influences and phenomena, optical delusions caused by a diseased retina or imagination, as indicated in the paper, all received a proportionate share of attention.

Dr. Blymyer reported a case of aphonia, which he had been very successful in relieving by tinc. capsicum, locally, as a gargle. Discussion by members, and report of cases, some peculiar, where transient loss of voice occurred with instantaneous recovery; complaint constitutional often, as well as local. Dr. Welch thought aphonia, at times, depended upon influences acting upon the nerve centers, but is often dependent upon structural changes in the larynx and sometimes occurs from follicular irritation.

The subject next discussed was treatment of rheumatism, in which the majority of members declared in favor of an alkaline treatment. Bromide of ammonium was advocated by Dr. Little, and in chronic cases, cimicifuga and iodide of potassium. The doctor spoke in favor of "insulation of beds," as recommended by Dr. Wagenhals.

Dr. Williams recommends opium and wine of colchicum in many cases, and thought the utility of "insulators" not yet established, and that the treatment of rheumatism, especially the chronic form, was yet largely experimental.

Dr. Westbrook gives quinine in enfeebled cases, and when giving opium, uses Dover powders in rheumatic trouble.

Dr. Hills recommends colchicum given so as to produce nausea in certain cases, when the local affection is migratory and approaches the neuralgic form.

Dr. Potter. The pathology of rheumatism is not well understood, and referred to several forms of treatment by eminent men, one of whom takes four or five pounds of blood in two weeks.

Dr. Hyatt. In chronic articular rheumatism, infiltration occurred without suppuration; but if it should lead to suppuration, it may then be considered chronic inflammation of the joint. Neuralgia frequently depends upon impaired nutrition in the nerve.

Dr. Constant said the series of affections have become less, which were formerly grouped together as rheumatism; that even yet certain forms of this disease are mistaken for neuralgia, and not many years since, there was little or no distinction between the two diseases.

Dr. Welch. A predisposition to rheumatism exists where there is an excess of fibrin in the blood; lactic acid is also said to be in excess, which, in acute rheumatism, more strictly speaking, indicates a certain course of treatment.

Dr. McIntire. The disease not unfrequently arises from irritation or an irritable condition.

Dr. Mercer thinks the disease obscure and closely allied to erysipelas.

During the discussion, Vogel was referred to, who found changes in the neurilemma of corresponding nerves, in articular rheumatism, where changes were found in the muscular tissue; and in this case (Niemyer), the rheumatism would be a so-called rheumatic neuralgia of the small nerves supplying these muscles.

A number of rheumatic cases were reported. It was observed

that a predisposition is less in the weak and anæmic, than in the apparently healthy and robust.

Next, *Dr. S. W. Fowler* read a paper on albuminuria, and its relation to the minute anatomy of the kidney.

The doctor, after giving the anatomy of the cortical portion of the kidney (the malpighian bodies, convoluted tubuli uriniferi, afferent and efferent vessels), stated his position as to the *etiology* of albuminuria as follows: Albumen is found in the urine under a variety of conditions. These conditions hide rather than explain why we find this element abundantly in the urine. The kidneys receive a much larger quantity of blood than is necessary for their nutrition, but when the blood reaches the capillary net tuft formed by the renal arteries, the larger portion is transuded into the cupped-shaped cavity of the tubuli uriniferi, while the remainder goes to nutrify the organ, and is returned by the veins. The albumen having been transuded with the urine from the pressure exerted, is taken up by the epithelial cells in the uriniferous tubules, and returned by the veins surrounding the tubuli uriniferi to the renal veins, thence to the general circulation. When the pressure is increased so as to cause the secretion to go on faster than these cells can take up the albumen, we will find it appearing in the urine. Should these cells become deranged and not able to perform their work, this element will appear in the urine. Should the blood receive a larger amount of albumen than used, this element will appear in the urine.

Personal.—Two physicians in Quincy, Ill., have been sued by a patient on whom they operated for hernia. The declaration states that the defendants conducted themselves in an ignorant manner by unnecessarily, wantonly, improperly, and unskillfully performing a surgical operation on the body of the plaintiff, by cutting through the flesh of said plaintiff into the cavity, and through the left lower region of the abdomen, and in an unskillful manner the defendants took and removed from the cavity of the abdomen of plaintiff twenty-five feet of bowels, *by reason of which ignorance his recovery is greatly impeded!*—*N. Y. Med. Rec.*

For Ingrowing Toenail.—*Dr. D. S. Fiske*, of Brookfield, Mass., writes: "Remove a V-shaped piece of the fleshy part of the toe so as to bring the nail over the outer part of the toe, making a flap of this outer part, and it will make a narrow toe and remove the difficulty better than any operation I have ever tried."—*N. Y. Med. Rec.*

Correspondence.

Editor of the Lancet and Observer:—As on subjects of medical inquiry no one can lay claim to infallibility of judgment, therefore he who undertakes to instruct his brethren should be prepared to have his utterances subjected to examination. Neither should he take criticism unkindly that is fair, and offered in the spirit of honest search for the truth. Indeed, it is to be presumed that he who speaks or writes on such a subject invites a responsive expression of the views of his auditors or readers, whether in acquiescence or dissent. And it is only by free discussion that errors become manifest; for, as already remarked, absolute freedom from error can not be accorded any man.

In the last issue of your journal, Dr. C. S. Muscroft, "Surgeon to the Cincinnati Hospital and Surgeon to St. Mary's Hospital," reports and comments on a case of injury to the head. In that article I find certain statements that will certainly admit of amendment, and a line of practice described, which I take the liberty of pronouncing utterly unjustifiable.

After detailing the history and progress of the case he asks himself the question, "what was the *exact lesion* produced at the time of the injury?" Most ordinary men would hesitate at attempting to define the *exact* extent and locality of any injury associated with the symptoms and appearances he details. But not so with your reporter, for he proceeds to state: "I was led to the conclusion, by the symptoms present, that there was a fracture at the base of the skull, *either in the anterior fossa, or the junction of the anterior and middle fossæ.*" Now as the "junction" or boundary between those fossæ is, for the most part, a sharp margin of bone, this would seem like drawing very fine lines! He next sums up the evidence on which he founded his diagnosis; and in support of the statement that external bleeding is not to be expected constantly in cases of fracture of the base, he, curiously enough, cites a case he had previously referred to. In that instance, also under his own observation, "*all the bones of the skull were broken, the brain mashed into a pulp, and the bones at the base completely comminuted.*" For reasons that are manifest the absence of bleed-

ing in that case is hardly surprising. The doctor next proceeds to analyze the paralytic symptoms, as follows: "There is but little doubt that the *optic nerve* of the left eye had received an injury, the effect of which was to produce the permanent *dilatation of the pupil* and dimness of vision, and in the beginning, dimness of vision of both eyes. Then, undoubtedly, the *third nerve* was also injured, producing the *immobility of the orbit*. And last, the *fourth and sixth nerves* were also injured, which produced the *paralysis of the eyelids and muscles of the eye*." The foregoing extract can not be said to be a model of clearness of diction—a quality so very desirable in a teacher—and indeed the originality of views on the anatomical points touched on, might prove somewhat confusing to the students of Sharpey and Quain, Erasmus Wilson, and other authorities. But rather than attempt to reconcile those discrepancies, I merely wish to add a brief comment on the line of practice pursued in this case. The narrative concludes with the statement that, "the plan of treatment adopted in the case of Love was mildly depletive from the beginning to the termination of his illness, etc." All of which is to be commended. But on the same page is to be found this statement: "To be more certain of the appearance of the scalp, the hair was closely cut off, and this revealed the injury on the left side of the head, *which was still more thoroughly explored by making an incision through the scalp to the bone*, where a slight depression with fissure was found. There being no decided symptoms of compression of the brain, such as to call for operative interference, no more than the exploring incision was made!" This statement is well calculated to excite surprise—surprise at the rashness of the act mentioned, and the seemingly unsuspecting innocence with which it is told! Just think of it! An incision made through the unwounded scalp down to the bone—a bone supposed to be fractured, according to the symptoms present! And what did that "incision through the scalp to the bone" amount to? It simply amounted to the conversion of a simple into a compound fracture! And the merest tyro knows that it is no small matter to add to the risks of a fracture of the skull the additional dangers of an open wound communicating with that fracture. So flagrant a violation of a well-established principle requires no comment. It is simply unjustifiable on any plea or ground. It was barren of any good result whatever—absolutely wanton. It afforded no aid, of any consequence, in the diagnosis, for that was founded on the rational symptoms, according to the statements of the report. And those symptoms were,

unquestionably, sufficient to justify such a diagnosis. And as for any therapeutic effect following the incision, there was none; for, in the absence of symptoms of compression, of course no benefit could be expected from any such procedure. It may reasonably be asked, Mr. Editor, does this report present a fair sample of Cincinnati Hospital practice and teaching? Is this the teaching that, in certain quarters, is so proudly held up as the teaching *par excellence*—the real, genuine, original thing, so to speak—so vastly superior to the “relashing of the books,” as the lectures in the colleges are described? If so, perhaps there are those who might be disposed to discuss the modest proposition that the only instruction of any value that medical students get in Cincinnati, is that embodied in the hospital clinics.

In concluding these remarks on Dr. Muscroft's case, I must not neglect to accord him full credit for his frankness, courage, and independence, in taking a position so squarely antagonistic to all authority and reason—to the teachings of experience as well as theory.

K.

Treatment of Chorea by Arsenic in Large Doses.—By Eustace Smith, M.D. Arsenic has long been regarded as a useful therapeutic agent in the treatment of chorea, but it may not be generally known that the curative value of the drug is greatly increased by administering it in full doses. The tolerance of children for arsenic is a matter of common observation, and this tolerance is especially marked in the case of a non-febrile disease, such as chorea, where there is no increased irritability of the digestive organs. To a child between the ages of five or six and twelve, the subject of this complaint, Fowler's solution may be given in doses of ten minims three times a day, directly after meals. The influence of this treatment upon the disorder is seen almost immediately, and it is rare for any of the physiological effects of the drug to be observed. By this means, cases of the disease which had resisted smaller doses of arsenic may be cured in a few days, and even severe cases seldom last longer than a fortnight or three weeks.—*British Medical Journal*, May, 1875.

Editorial.

Significant.—At the recent meeting of the Michigan State Medical Society, “Dr. Hitchcock offered a resolution requesting the regents of the University to make, as soon as practicable, a full three years’ graded course of study and lectures obligatory upon all students graduating in the medical department, and that the requirements for admission into this department be made equal to those for admission into the scientific department.

“Regent Rynd said the policy of the regents was to establish, within two years at farthest, such a state of things as indicated by Dr. Hitchcock’s resolution.

“Dr. Brodie announced that the Judicial Council had organized with Dr. E. W. Jenks as president, and Dr. Wm. Brodie as secretary.

“Prof. Dunster and the mover also spoke on Dr. Hitchcock’s resolution, and it was adopted without opposition.”

This action on the part of the State Medical Society and of the officers of the Michigan State University will receive the hearty approval of every man who feels an interest in the advancement of medical education.

It will be remembered that a year ago, the board of regents of the University adopted a resolution, requiring every student that entered the medical department to submit to an examination as to preliminary educational qualifications to begin the study of medicine.

President Brodie, of the State Medical Society, could well say with pride, that “he congratulated the society upon the high character and enviable standing of the profession in Michigan, which, he declared, was not surpassed in any State in the Union.”

The following announcement of requisites for admission to the medical school of Harvard University speaks for itself:

Requisites for Admission.—In and after September, 1877, all students seeking admission to the medical school must present a degree in letters or science from a recognized college or scientific school, or pass an examination in the following subjects:

“1. Latin. The translation of easy Latin prose. French or German will be accepted, however, as a substitute for Latin.

"2. Physics. Candidates will be required to show such a knowledge of this subject as may be obtained from Balfour Stewart's elementary works on physics.

"The examinations will be conducted in writing, and in judging the work of the candidates, the spelling, grammar, and construction will be considered.

"Graduates in medicine will not be required to pass this examination on joining the school."

Prof. Gross, in his valedictory address at Jefferson Medical College last spring, made use of the following pertinent language: "I should first and foremost exact as an essential prerequisite that every youth applying for admission into our ranks should be a gentleman; secondly, that he should possess a respectable amount of brains; and thirdly, that he should have a good English education, with a sufficient knowledge of the Greek and Latin languages to enable him readily to comprehend and master the technicalities of his profession." To this end he would enforce a longer period of preparatory study.

By reason of long experience and success as a teacher of surgery, and intimate knowledge of the wants of an intelligent practitioner, with a familiarity with the requirements made of those about to begin the study of medicine and surgery in England and on the continent of Europe, the above language used by Dr. Gross is especially significant.

At the same time, Dr. C. G. Comegys, of this city, long a successful teacher of clinical medicine, in delivering the annual address before the Society of the Alumni of the Medical Department of the University of Pennsylvania, used the following language:

"In our literary institutions and schools of technology, a preliminary knowledge is demanded for matriculation; and, after entrance, the pupils are required to fulfill certain forms of recitation and demonstration. So it should be in medicine. You must demand, professors, elementary knowledge for matriculation, to be shown by an examination; and then your courses of instruction should be so modified as to afford every facility to the pupil for a high qualification for his duties as a physician. It will surely be necessary to extend the duration of a session. . . .

"In foreign schools a session is double the length of ours, and about two years more are required to obtain a degree than with us. But if we can establish, as a rule, a good examination as a requisite for admission, and a course of two sessions of demonstrative

teaching of eight months each, and for two successive years, it will place medical education on so much higher a plane than at present occupied, that the most advanced reformers will be content to wait patiently to see this well tried, before demanding a further advance."

On the subject of a graded course of instruction, Dr. Comegys goes on to say, "That a progressive system of instruction is generally thought to be superior to the repetitive, now so generally employed. To bring every department of medicine at once before the student, has always been excessive; and the tramping from one lecture-room to another for six or seven hours a day, has exhausted the brain too much to allow opportunities for demonstration; and the final effort to be thoroughly ready for a successful examination in seven to ten subjects, in order to obtain a degree, has been nearly overwhelming. It has been accomplished by a dire effort of the memory, stuffed with the condensed information found in essentials, reviews, conspectus, etc.; and the average student, when crowned with the doctorate, has felt that he was just about ready to go where he could get some practical information."

Those who were at the last meeting of the American Medical Association, held at Louisville, will remember with what earnestness President Bowling delivered the following portion of his inaugural address:

"Let it be solemnly resolved by this meeting," said he, "that it shall be regarded as derogatory to the character of any physician, in any part of the United States, to take under his care as a student of medicine any one who can not exhibit evidence of having taken a degree in a regularly chartered college, or a certificate of qualifications necessary to become a student of medicine, from a board of examiners appointed for that purpose by the American Medical Association. This will do the work.

"Territories and new States, in a country like ours, in a formative state, will provide themselves with medical helps in the mode we have described, which, existing outside of this body, and independent of it, will occasion it no concern whatever. Nor would the schools suffer pecuniary loss under this rule. When it was generally known, as it would soon be, young men desiring to enter the profession would earnestly devote themselves to the duties of preparation, nor relax their efforts till possessed of the degree or the certificate.

"Again, many educated young men, under this rule, would turn

their attention to medicine, whose votaries were to consist of their peers, who, under the existing rule, would not risk its leveling influences. Let the doctorate imply something more than 'two full courses of lectures, the last of which in this institution.' Besides, it would give the college an ample excuse for not receiving every uneducated, lazy dolt who desired to make a living under false pretenses.

There is nothing really binding in the rule suggested. The only power in the matter is the great moral weight of the association. It enacts nothing, but simply asserts what every member of it knows to be right. After a few years such a certificate of the examining board, or evidence of a college degree, might be declared necessary in order to enable an applicant for membership in this body to secure admission; for surely it is the common privilege of all organizations to judge of the qualifications of their own members; then will the certificate of membership here pass the holder anywhere as a gentleman and scholar.

"It is precisely in this way that the medical department of the army and navy are purified. The adoption of this addition to the code of ethics would furnish medical gentlemen an excuse for getting rid of applicants for office study whose preliminary education they know to be defective, and whose relations they would dislike to offend by saying so."

Dr. Bowling has had an experience of more than a quarter of a century as a medical teacher, and as the editor during that time of a prominent medical journal, had abundant opportunities to observe the actual wants of those who desired to enter the medical profession.

Dr. William S. Edgar, editor of the *St. Louis Medical and Surgical Journal*, in his address as president of the Medical Editors' Association, at Louisville, last May, made use of the following language:

"That the most profound and difficult scientific studies should be entered upon (with any possibility of success) by those wholly untrained to study, with a limited knowledge of their vernacular, no ability to comprehend the scientific terms or technicalities in constant use, would scarcely be equaled in absurdity by admitting pupils to the freshman class of a college, before they could read and write; hence, our medical diplomas are no longer sufficient evidence of medical knowledge. While the diplomas conferred by our literary colleges and high schools have lost nothing of their

significance, as to the attainments of their possessors, as they were compelled to undergo examination before matriculation, as well as from year to year, as they progressed. Passing strange that the very college where examination preliminary to matriculation is more needed than any other, is just where it is omitted in the United States altogether. We rejoice to hear of the beginning of a better rule in a few medical colleges, where preliminary examinations have been timidly commenced.

"This practice of medical schools admitting everybody that offers, has greatly impaired the discipline of many *literary institutions*, owing to the current sentiment, that a "college course" was not needed or required in medicine, so if students enter college, who contemplate the study of medicine (which we fear they seldom do now-a-days), they wish to pursue an *irregular course*, omitting the languages."

Surely there is no uncertain sound in the above testimony, nor will the qualifications of the above gentlemen to express opinions on this important subject be questioned. It has been said by some gentlemen holding professorial positions and occupying places that enable them to guide the policy of the institutions with which they are connected, that "the above gentlemen are ten years in advance of the times in their notions," and that consequently the time has not come to put in actual operation a system of medical education that they acknowledge to be correct in principle. To such gentlemen we can not but say, that they are as much behind the demands of the times in this matter, as they suppose the above gentlemen to be in advance. In confirmation of our views, witness the above action of the Michigan State Medical Society, and the hearty applause given President Bowling when he uttered that portion of his address quoted above.

The great success of Harvard University is marvelous in the eyes of all old-plan professors with old-plan ideas. We have been reliably informed by those in position to know, that the students applying for admission to the Medical Department of Harvard University within the past two years, have been young men of superior education and intellectual attainments, in comparison with those who formerly attended medical lectures in that school. This will undoubtedly be the experience of any other medical college that pursues a similar course.

We do not hesitate to say that we believe the time is very near at hand, when those medical schools that pursue the old plan of

teaching or rather lecturing will be regarded by the great majority of the profession as second and third rate schools, that open wide their doors to those who are unable to pass a preliminary examination on entering the superior graded schools, and it will be the impression of the medical profession generally, that the students who enter these second-rate schools, go there not so much to obtain instruction as to secure a diploma.

There is no royal road to knowledge. It is only by continuous systematic application that a high order of intellect may be developed and made useful. Dr. Gross well says: "Few persons are aware that medicine is a great study, requiring a high order of intellect, vast research, and incessant training for its successful practice." From this time henceforth, let reform in medical education be the watchword of every faculty of a medical college that is ambitious to have the school with which they are connected known and regarded by their fellows in the medical profession as a first-class institution of learning, and not a place of resort for the purpose of obtaining a diploma by a display of a minimum amount of knowledge and the transfer of a few dollars.

Since the above was written, we have received a letter from Prof. E. B. Stevens of Syracuse, N. Y., from which we make an extract that indicates that not only is his head level on this important subject, but those of his colleagues are in the same enviable condition:

"SYRACUSE, N. Y., June 24, 1875.

"*My Dear Doctor*:—We not only require a *graded* course, but we exact entrance examination and an annual course of nine months' consecutive teaching. Have you got anything that promises more than this?"

We announce the retirement of Dr. William K. Bowling from the editorial management of the *Nashville Journal of Medicine and Surgery*. For twenty-five years has he held up the standard of progress in legitimate medicine—for twenty-five years has he kept abreast of the times in medical education; and during his whole long professional career has he advocated with no uncertain sound what he justly termed "the religion of medicine—its ethics." Having accomplished a good work, he, while yet vigorous, gracefully turns over his labors to his more youthful colleagues, Dr. William T. Briggs, who has long been his associate, and Dr. Thomas O. Summers.

With fond recollection, we shall ever remember Dr. Bowling as in the fullness of years, honor, and glory, he worthily stood by the side of that quartette of giants in medicine and surgery, whom every physician delights to honor, and so feelingly referred to by him in the closing part of his address before the American Medical Association, as follows:

*"Gentlemen:—*Western medicine, for a long time, established its Mecca at the falls of the Ohio. Whatever the fashioners of taste may determine, the medical heart can not go far astray in recalling the Titans that officiated at its altars. Many of them 'sleep well after life's fitful fever,' but the rock-girt and rock-floored river in the neighborhood of their ashes, as it throws its disturbed waters over the cascade, will chant their requiem while grass grows or water runs. One,* in a green old age, whose fame has filled the world, stands, like the statue of a demigod, poised on the apex of his monumental shaft, far above all surrounding things, pointing to an earlier day-star than greets the vision of ordinary mortality. Another,† happy in the memories of a well-spent life, the charming grace of whose cultured pen has left an imperishable record, lingers in the peaceful enjoyment of that subdued and enchanting twilight of life between sundown and the 'deeper gloaming,' so in harmony with the spirit of the good, having thrown his mantle on other shoulders, patiently awaits the 'translation.' One,‡ the Galen now of the great city of the Republic, garners the golden sheaves of a crop sown long ago, and thoroughly cultivated. Another,|| the American Dupuytren, on the fringe of the sunny land of the orange and the magnolia, with the premonitions of a glorious sunset gathering about him, in faith and hope is also ready. We know that their example is not lost on those who have taken their places in the flourishing medical institutions of this noble city—a city whose munificence to medicine has entitled it forever to the kindest memories of the profession."

Dr. George H. Bixby, of Boston, respectfully solicits from the members of the profession in the United States, who have performed ovariectomy, their experiences in brief, in regard to the occurrence of pregnancy subsequent to the operation.

Answers to the following questions will be gratefully received and duly acknowledged:

Number of cases; age; social state; previous births; complications; adhesions; treatment of pedicle; number of births; nature of births; subsequent history.

* S. D. Gross.

† L. P. Yandell.

‡ Austin Flint.

|| P. F. Eve.

Obituary.

Proceedings of the Medical Profession of Richmond, Ind., to take action in regard to the death of Dr. Vierling Kersey.—A meeting of the medical profession of Richmond and vicinity, assembled at Dr. Weist's office, June 5th, at 2 o'clock p. m., Dr. Hibberd acting as chairman, and Dr. D. H. Dougan, as secretary.

The chairman stated that the meeting had been called to express the feelings of the profession in regard to the loss it had sustained in the death of an honored member—Dr. Vierling Kersey—whereupon Dr. Weist offered the following, which was adopted:

“The medical profession of Richmond and vicinity are called together by the death of Vierling Kersey, M.D., one of the oldest practitioners of medicine in Wayne county. We desire by our action to testify our reverence for his memory, and affection for his person.

“Dr. Kersey was born in Guilford county, North Carolina, September 8, 1809, and died in Richmond, Ind., June 3 1875. His family removed to Indiana in 1820, and settled near Dublin. He studied medicine with Dr. William Butler, of Knightstown, and attended a course of lectures at Jefferson Medical College, in the winter of 1837–38. In the latter year he commenced practice in Knightstown, where he married, in 1839. In 1840 he removed to Carthage, in Rush county. In 1841 he removed to Spiceland, in Henry county. In 1842 he left Spiceland and located in Marion, Grant county, where he remained until 1844, when he came to Wayne county, locating in Milton, where, obtaining a successful business, he remained until the winter of 1850–51, when he attended a course of lectures at the Ohio Medical College, receiving at the close of the term the degree of M.D. Returning to Milton, he continued in practice until November, 1861, when he located in Richmond. In this city he soon attained a good business, which he held until his death. In the estimation of his patrons, and that of the community generally, his place as a physician, neighbor, and friend, was second to none.

“For several years he was subject to attacks of slight peritonitis. About two years since he was dangerously sick of this disease.

On his recovery he expressed the belief that another attack would probably destroy his life. During the year preceding his death his health was excellent. During the two or three weeks preceding his final sickness he suffered occasional pain; this gave him fully to understand that recurrence of his old malady was threatened. He continued actively at work, however, until Sunday (May 30), when he was seized by a violent chill, which ushered in active peritonitis. Despite the assiduous attention of relatives, friends, and physicians, the disease progressed until Thursday evening, when the final scene was reached.

"Thus died our professional brother and friend, died as he wished, in the midst of his work, before his usefulness as a physician was impaired by age or disease.

"In his professional life he was active, enthusiastic, and unremitting in his labor for the good of his patients. He was entirely devoted to the study and practice of medicine; his profession, therefore, held no divided place in his life. Not his intellect alone was delighted with the problems of disease; his heart was moved to pity by human suffering, and his benevolence exercised for its alleviation. With the greatest firmness and decision, he united the tenderness of a woman; unsparing in his denunciation of shams and pretenses of all kinds, with a rare penetration he discovered and honored true worth. With great originality of thought, he combined a caustic wit and directness of speech that sometimes wounded those who knew not the kindly feeling that lay beneath.

"To the grave problems connected with the position and destiny of man, he gave much thought; their consideration had for him peculiar attraction, and he was always ready to discuss them with the gravity demanded by their importance. He was catholic in his opinions, tolerant of differences and universal in his charity. With an abiding faith in the future, he believed the best preparation for the unknown to-morrow to consist in performing, to the best of his ability, the duties of to-day; carrying into practice his belief, he kept fresh a natural buoyancy of spirit, so that he seemed to grow old only in body, and even when passing into the shadow of death, his serenity and philosophy did not desert him.

"As a neighbor and citizen, he commanded universal respect, as in all the transactions of life he was governed by a delicate sense of personal honor, and of the rights of others.

"As a friend he was true and unwavering, and to those who en-

joyed the honor of his intimate friendship, he disclosed a richness and delicacy of thought hardly suspected by others.

"Among the natural qualifications necessary for the successful physician, Dr. Kersey possessed, in a marked degree, a delicacy of touch and perception, a logical mind and untiring industry. Always a careful student, he was thoroughly versed in the science of medicine, and during his years of active practice, accumulated a vast amount of practical experience, that rendered him especially valuable as a counselor in cases of obscurity and danger.

"In our various medical societies, county, district, and state, he held a leading place, being elected president of the latter in 1866. Many papers from his pen, published in the various medical journals of the country, attest his professional industry. He died in the possession of a professional reputation equal to any in the state, and rich in the general good-will. Wherefore be it

"*Resolved*, That the medical profession of Wayne county tender to the memory of our deceased friend, the tribute of our respect for his talents and his virtues, and affection for the amiable personal qualities with which he was so richly endowed, and to his surviving family, our sincere sympathy in their loss of father and friend.

"*Resolved*, That a copy of the proceedings of this meeting be furnished the city papers, the *Indiana Journal of Medicine*, and the Cincinnati LANCET AND OBSERVER, for publication."

We regret that we have not space to give in full the remarks of Drs. Weist, Thomas, Waring, Clark, Dougan, Davis, and Boyd.

Reviews of Ziemsen's Cyclopædia, Vol. III.; Biographical and Critical Miscellany by Prescott; and Manual of Diet by Chambers, will appear in September number.

A good Place to visit—The Sixth Cincinnati Industrial Exposition. Open to the public from Wednesday, September 8th, to Saturday, October 9th.

THE CINCINNATI

LANCET AND OBSERVER.

J. C. CULBERTSON, M.D., Editor.

VOL. XVIII.—SEPTEMBER, 1875—No. 9.

Original Communications.

Art. 1.—What important part does Alcohol play in the Economy of Man?

A paper read before the Licking County Medical Society, April 5, 1875, by
CHAS. P. KING, A.M., M.D., Newark, Ohio.

This is a very important question, and one that should claim the careful consideration, not only of the man of science, but of every anxious seeker after truth. At no time in the history of the world has falsehood and misconception of fact held so wide a range as at this very present. Truth and error seem to be so intimately interwoven, the one with the other, that it has become almost an impossibility to discern the truth as it really exists. Such being the case, very much of what is true, on the one hand, has been disbelieved and rejected, while, on the other, much of what is false has been received. As a result of this, very much harm has been done in the world.

Reformers who are endeavoring to convince the world that the time is near at hand when alcoholic liquors will be discarded entirely by legislative enactments, "because alcohol is a poison," will

do well to inquire into the nature and qualities of the thing which they proscribe. That the excessive or imprudent use of alcoholic liquors is a great damage to society, no one will for a single moment doubt; but we submit, that, in dealing with this subject, it is safer, because wiser, to deal with it on the basis of historical and scientific truth. We should be very guarded lest we go to extremes in our discussion of this great question. The use of alcoholic beverages, in some form or other, dates as far back as the deluge, and from that time till now they have formed a part of the aliment of man. They have been used to excess by very many in all ages, and hence instructions as to their proper use have marked the teachings of the wise and good of every generation. At this present time, however, it is denied by a very large class of honest and honorable men that alcohol possesses any *nutrient* qualities, and as we claim this to be a sweeping statement, it will be our endeavor to prove, by giving the testimony of some of the wisest scholars and closest observers of the times, that alcohol, "when not taken in excessive quantities," has effects analogous to ordinary food upon the human system. Let us look at this subject in a fair and candid manner, from a scientific point of view. In the first place we would ask, in order to come down to the very root of the matter, what is alcohol? Secondly, what important part does it play in the economy of man? Thirdly, how should it be used?

First. What is alcohol? It is defined as being a product which results from the vinous fermentation in substances containing grape sugar. At a temperature of 80° Fahrenheit, the presence of a fermenting body converts the solution into carbonic acid and alcohol. Its preparation may be divided into three stages: The production of a fermented vinous liquor; the preparation from this of an ardent spirit by distillation; and lastly, rectification or purification.

When vegetable substances are placed in contact with air and moisture, they undergo that kind of decomposition which is denominated fermentation. The products of this process vary at different periods or stages, and on this depends the distinction into kinds or varieties of fermentation. Thus, starchy liquids under certain circumstances become saccharine, the process being termed *saccharine* fermentation. Sugar dissolved in water and mixed with nitrogenous matter is converted into carbonic acid and alcohol, and this process is termed *vinous* fermentation. Under some circumstances, lactic acid and syrupy mucilage are formed by the action of the nitrogenous or mucilagenous principles

of vegetable juices on the sugar. The change has been denominated *viscous* or *mucilagenous* fermentation. Vinous liquids are capable of generating acetic acid, and the process is called *acetic* fermentation. Lastly, most vegetable substances are slowly converted into gases and a substance called *vegetable mold*, constituting the process termed *putrefactive* fermentation.

The liquid obtained by the various fermentations has received different names, according to the substance from which it is obtained. When procured from fresh juices of fruits—as grapes, currants, gooseberries, etc.—it is denominated wine; from a decoction of malt and hops, ale and beer; from the expressed juice of apples, cider; that of pears, perry; and from a mixture of honey and water, mead. From the distillation of wine we have brandy, and from the distillation of fermented infusions of corn and rye we have whisky.

We now come to the consideration of the second branch of our subject, namely: What important part does alcohol play in the economy of man?

To say that alcoholic liquors should be discarded entirely from use simply because they contain *poison*, is certainly no valid argument against a proper use of them; for we might use the same argument against nearly all of our ordinary articles of food, for they all contain more or less poisonous elements. There is poison in our common garden lettuce and in the hops with which we raise our bread. The oils contained in our table mustard and pepper, and in that healthy vegetable, the onion, are among the most destructive poisons with which the chemist is familiar; and in the language of another, “The most skillful chemist could hardly prepare a meal that would not contain more or less poisonous elements.” There is poison in the dry loaf, the yolk of the egg, and in the very milk that the infant draws from its mother’s breast. Nor is this poison confined to our food alone; it is the normal condition of the atmosphere; we are continually inhaling more or less of it into our lungs. The water we drink is rarely, if ever, found in a state of absolute purity. Take, for example, a drop of what we call our *purest* water; place it under the microscope, and it will be found to be literally swarming with animalculæ, saying nothing of its other impurities and poisons. Hence we see there is more or less poison in everything that God has made. To single out alcoholic liquors, therefore, and say that they should be discarded because they contain poison, is not only ridiculous, but positively absurd.

After repeated experiments, the most reliable chemists and physiologists have shown that when alcohol is taken into the system, in "very small quantities," it disappears in the body. Neither in the breath nor perspiration, nor in any other secretion, can alcohol be found; but if taken in very large quantities it leaves the body again as alcohol. The amount of alcohol decomposed in the body corresponds exactly with the amount of oxygen which the body is able to furnish. Alcohol has the strongest affinity for oxygen, and is therefore one of the strongest preservative agents, not only inside but outside of the body also. By its extreme thinness and permeability it penetrates the membranes of our body quicker than any other material, consuming all the oxygen which can be found in the organisms. Thus, it becomes decomposed first into carbonic acid, water, and heat; but when there is a deficiency of oxygen it forms various acids, such as acetic and butyric acids. Whatever of alcohol remains after the oxygen is all used up, is unchanged, and thrown off from the body as such.

Alcohol, in all its myriad preparations, is a powerful substitute for food; it has been termed by very many writers *negative food*. When used largely, it impairs the appetite, and may almost entirely destroy it, but when taken in moderate quantities is assimilated and becomes food. Every physician of experience knows how almost indispensable this agent has become in the treatment of many of our low forms of fever; and life has been prolonged, nay, even saved, in many cases, by its administration, where ordinary food could not be administered. Nor need we mention how important this agent has become in the treatment of asphyxia, syncope, and in the latter stages of typhoid, typhus, and malignant fevers; and in surgery, how very potent an agent it is in sustaining the flagging energies of the system, resulting from shock and loss of blood. It has been demonstrated by actual experiment that life can be prolonged for an indefinite period by the use of alcoholic liquors alone; and hence we are inevitably forced to the conclusion that they have effects analogous to ordinary food upon the human system, for Webster, in his definition of food, says: "It is anything that will sustain life, or whatever furnishes nourishment for the body."

In order to bring this matter fairly before you, we will quote from some of the leading authors of the day. The late Professor Agassiz, upon being asked how extensive and how constant is the use of wine as a beverage among the people of Switzerland, replied: "It is the universal beverage. It is so completely a part

of the alimentation of the people that anybody who is not able to supply himself with it is considered a pauper and deserves to be supplied with it. Wine is given as one of the charities extended to the poor of the country, and the pauper who comes to the clergyman's door receives meat and wine." He says, still further: "I do not know of a more temperate and steady class than are the peasantry and citizens generally of Switzerland." His testimony is corroborated also by that of many other travelers who have recently visited that country. They say drunkenness is almost unknown among the people of Switzerland.

We would say, in this connection, that it is our honest conviction that if these light wines could be introduced into our own country, and could be used almost to the entire exclusion of other stronger spirits, drunkenness would be very much diminished. There seems to be a craving for stimulants of some kind or other, by almost all classes of the people throughout our country, and if this want can be supplied by the introduction of *harmless potions*, is it not the duty, not only of philanthropists, but of every one who has the good of society in view, to use their influence to bring about such results? This is a question which is now being agitated in some sections of our country, and we think it will not be very long before an experiment at least will be made in that direction.

Says Professor Clarke, of Harvard University: "There is a class of agents which tend to check or retard the disintegration of tissues. In the process of life there is going on, all the time, a construction or building up of the system, and a destruction or wearing away, which is continued every moment of life. Certain agents tend to retard one or the other of these processes, or to increase one or the other. We find, all over the world, tea, coffee, fermented liquors, or alcoholic beverages distributed wherever the human race are to be found; and they seem to afford the opportunity of checking a too rapid destruction of the tissues, just as other means are employed to increase the construction, and so keep up the balance right in the body in health. Alcoholic beverages, including all under that name, come in that general class.

Says Professor Jackson, the chemist: "Alcohol and alcoholic liquors act as respiratory food. When taken into the system either in the form of wine or any other of our distilled spirits sufficiently diluted with water, it goes into the circulation. The alcohol takes the place of so much food in our bodies in the process of respiration. The carbon and hydrogen are oxygenized and be-

come removed from the system, and thus save the consumption of just so much of our tissues. Different spirits and different wines contain different ingredients. Brandy contains a large per cent. of alcohol, which stimulates the brain and heart; whisky, fusil oil, which operates upon the lungs and liver; gin stimulates the kidneys, and when taken in excess, acts injuriously upon the liver and kidneys. The moderate use of alcoholic liquors, so far from doing any harm to the human system, serves to sustain its power of endurance, and saves the destruction of much of our tissues, and is therefore conservative to the system. Wines contain, besides alcohol, sugar, gum, tannin, and several other substances, which also act as food."

This seems like very strong language; and coming, as it does, from such a reliable source, must as a matter of course carry much weight with it.

The eminent Professor Wood, of Philadelphia, holds the opinion that alcoholic liquors, besides furnishing some nutriment, act by promoting digestion and sanguification, thus causing a more thorough appropriation of food to nutrition, and that the saving thus effected more than counterbalances the waste of the tissues, implied by increased vital action.

Professor E. N. Horsford, the eminent German chemist, upon being interrogated upon this subject, replied as follows:

Q. You are a chemist by profession?

A. I am.

Q. Did you pursue your studies during any part of the time abroad?

A. I did, in Germany, with Professor Liebig.

Q. Are you familiar with his theory of food, and with his division of the same?

A. I am.

Q. What are his two great divisions of food?

A. He regarded food as being divisible into two classes—one respiratory and the other nutritive.

Q. What were the principal elements which entered into the division of food which he classed as nutritive?

A. Nitrogen was one of its prominent constituents.

Q. Has alcohol, or any combination into which alcohol enters, any place in either of these divisions?

A. Yes, sir; it would come under the head of what is called

respiratory food, which includes starch and oil, and other substances which, when burned, keep the body warm.

Q. Have you any opinion whether any form of alcoholic drinks act as food?

A. I have: I think it is food. It ministers to the strength of the organism, and it may also enter into the organism. It is allied to fat and substances which produce fat; and so far as it renders more perfect the digestion of food, it acts itself as food. Its action is to delay metamorphosis. It acts in that respect as the aroma of tea and coffee does, and as some of the essential oils do. Perhaps the most recent experiment that has been made is an experiment going to show that all this class of bodies do actually fulfill the office of food, and that they enable man to perform feats of strength which he could not do in any other way. These experiments were tried in Switzerland a few years ago.

We might quote many other authorities emanating from various sources, but will close with the following. Last spring, Dr. Edward Curtis, Professor of Materia Medica and Therapeutics in the College of Physicians and Surgeons of New York city, wrote a very remarkable letter to the New York Tribune on this subject, from which we clip the following extracts. He says: "I take the liberty of asking space in your columns for the accompanying remarks on the general nature of the action of alcohol on the animal system, which seems to me to be called for by the many erroneous ideas on that subject current in the newspapers. And as much of what I have to say is opposed to the common opinion, I may perhaps be pardoned for remarking, as a sort of voucher for such a statement, that being the teacher of materia medica in one of the medical colleges of the city, I have necessarily given a good deal of attention to the study of the physiological action of all articles used in medicine, and am obliged to keep myself carefully informed of every advance in knowledge on such subjects. As no good to the temperance, or any other cause, can come out of misconception as to matters of fact, I am impelled to say that late researches in physiological chemistry have put the action of alcohol on the animal system in a new light, and that many of the sweeping statements of the times can no longer be received. Contrary to what was lately believed by many, it has been proved, beyond the possibility of a doubt, that alcohol when drunk is not ejected from the system unchanged, except in trifling amount when taken in grossly intoxicating quantity. On the contrary, in ordinary

amounts, it is wholly consumed, transformed into the system, and by the very nature of its chemical composition is capable, like certain elements of ordinary food, of thus yielding force, which can be used by the economy to do life work, as the heat of the burning coal drives the engine. In this fact we have the key to the effects of alcoholic drinks on man. Thus, within certain limits of dose, alcohol is transformed, like ordinary food, into the system, without producing any injurious effects; and yielding useful force for the purpose of the economy, must be considered as a food in any philosophical sense of the word. And an important point to know, and one little understood, is that this food action is attended with no exciting or intoxicating influence; but the whole effect, like that of ordinary food, is seen in the maintenance or restoration, according to circumstances, of that balance or function called health. But if taken in greater quantity than can be utilized as a force-yielding food, the excess of alcohol acts as a poison, producing a well-known train of perturbations of function. And—a point again generally misunderstood—all signs of departure from the natural condition in the drinker, from the first flushing of the face, brightening of the eye, and unnatural mental excitement, to the general paralysis of complete drunkenness, belong equally to the poisonous effects of alcohol; that is (for I wish to be understood as strongly insisting upon this point), even the early phases of alcoholic disturbance, which are often improperly called ‘stimulating,’ are part and parcel of the injuriously disturbing influence of overdosage, and must be put in the same category with the more obviously poisonous effects of pronounced intoxication.”

Alcohol has thus a twofold action: First. It is capable, in proper dose, of being consumed and utilized as a force producer; in which case there is no visible disturbance of normal function. Such action can not be distinguished by the drinker or physiologist from that of a quickly digestible fluid food, and is no more an “excitant” or “stimulation,” followed by a “recoil” or “depression,” than is the action of a bowl of hot soup or a glass of milk.

The second action is the poisonous influence of an excess of alcohol circulating in the blood, which makes itself sensible to the drinker by peculiar sensations and disturbances, and is not only followed by “depression,” but is itself a form of depression; that is, a disturbance of balance—an unnatural perturbation of the normal working of the functions.

Every reader of these lines will at once ask: What then is the

limit as to the quantity within which alcohol exerts only a food action, and beyond which it begins to poison by its excess? This question can not be answered categorically; for it so happens that the "poison line," as it has been aptly called, is a shifting one. Even in health it varies according to age, sex, individual peculiarities, and habits; and even in the same person, according to his physical condition for the time being—when fatigued by bodily or mental work; when suffering from an emotional agitation—as anxiety or fear; when worn by loss of sleep or blood, or by pain, amounts which ordinarily would flush the face, and somewhat confuse the mind, will be borne without producing the slightest symptoms of intoxication, the whole effect of the drink being expended in relieving the perplexing malaise, and restoring the system to its normal condition. And in more formal morbid states, as in many diseases, the poison line often shifts to an alarming degree, so that what would in health produce even dangerous drunkenness, will be borne without causing the least intoxication, the whole of the alcohol being apparently utilized by the system for obtaining the life-saving energy which this fluid, from its swift absorption and ready chemical change in the blood, can so quickly yield.

Much opprobrium, of late years, has been heaped upon the medical profession on account of their indiscriminate use of alcoholic liquors in their prescriptions; and in some cases they may be justly deserving of censure. We would say but one word on that point, and that is this, that we, as physicians, should never lose sight of the fact that alcoholic stimulants are agents potent for evil as well as good. They should be administered with great care, and their use diminished or discontinued as soon as practicable. There is no doubt but that a course of over-indulgence is sometimes commenced by the use of alcohol as a medicine; and while we claim that its use as a therapeutic agent is highly essential to the physician in his treatment of many forms of disease, we will be frank in admitting, also, that in some cases its use is wholly unnecessary, and really injurious rather than beneficial in its effects.

Physicians can not regard themselves as free to say that they shall or shall not, under any circumstances, use this, that, or the other remedy in the treatment of diseases. They are bound to use whatever remedies science and experience have taught them to be efficacious in the cure of disease. If the physician is called into a case where there is an extreme and perilous degree of prostration,

and where a slower remedy would not answer, thus saving the patient's life, then that physician should have no remorse of conscience for having used alcoholic stimulants, although drunkenness might follow. The patient himself, in that case, not the physician, would be responsible for the bad results. From a long experience and observation, we believe that in health the use of stimulants is injurious—the person is better off if he abstains entirely from their use; but in some forms of disease, good results often accrue from a proper administration of them.

To prohibit stimulants entirely from our modern civilization would be as morally impossible as it would be to prohibit the use of beef, or bread, or fruit. They are woven in, and have become a part and parcel of our modern society, and will probably continue to be so until that society shall perish from the face of the earth.

In conclusion, we would say that it is our honest conviction that the temperance cause would be much stronger in our own country to-day, and the total abstinence principle commend itself more readily to the people, were all the facts concerning alcohol admitted, and an appeal made to the intelligent judgment and consideration of men on the basis of these facts. Nothing is ever gained by misrepresentation. If alcohol is, in all cases and in all quantities, a poison, let us know it and be confirmed in that fact. If, however, it is not a poison when properly used, let us be just as free to admit it, and leave the whole matter to the intelligent judgment of the people.

We are not of that number who believe in the indiscriminate use of alcoholic liquors. On the contrary, we have ever advocated that they should be used with great care and circumspection. They should be used and not abused. An All-wise Creator has given them to us for our good; and, if properly used, will subserve to the wants and happiness of man; but if abused, they will prove, like many other good things in this world, a curse rather than a blessing.

Art. 2.—The Use of Opium.

Read before the Alumni Association of the Miami Medical College, Cincinnati. By GEORGE CONNER, M.D., Cincinnati, O.

The consumption of opium, in its various forms in the United States, is assuming gigantic proportions. The increasing demand for this drug is out of all proportion to the increase of population in the country, showing that the illegitimate consumption of this agent is becoming alarming.

The last statistics show that the importations of opium into this country from Smyrna, India, and China, amount to twenty-one thousand pounds annually, and the manufacturers of morphia in Philadelphia say that the demand for this drug is far in advance of their ability to supply it.

The price of opium in the last four years has doubled, notwithstanding the quantity on hand now is much greater than the quantity on hand four years ago.

The power of opium for doing good is vast; in fact, the medical profession would be almost disarmed without it. Thousands would die, exhausted by the tortures of pain, were it not for the power of opium to subdue it; for, as has been truly said, "*Pain kills.*"

The host of slaves to the opium habit is increasing rapidly, and the clanking of their chains may be heard from many directions, and still we stand quietly by and see new victims blindly holding out their hands to receive the shackles which can seldom, and I might almost say never be broken, except by the strong arm of death.

Why do men allow themselves to be caught in the snares of this powerful enemy to human existence? The human race demands a stimulant, and if it can not have one thing it will have another. Often, if a gentleman is too respectable to drink rum, he will indulge in the more genteel dissipation of eating opium.

There is a universal propensity to employ some artificial means to promote a flow of pleasant and beautiful thoughts, and to drop for a time the silken vale over the sorrows and disappointments of this life. This propensity can be fought desperately, but not conquered. It has been fought desperately, and this fight may be said to constitute the one never-ending war of the human race.

I once knew a servant girl who worked for a farmer's family for one dollar and fifty cents per week. Out of this small pittance she

spent each week one dollar and twenty-five cents for opium. If anything happened to prevent her obtaining the usual amount of opium, she was rendered utterly helpless, and was obliged to go to bed.

Upon inquiry as to how she contracted the habit, she said, as many of them say, "The doctor prescribed it for me when I had neuralgia, and when I was cured of the neuralgia I found it impossible to do without opium."

I was called to see Mary H. ; colored ; 28 years old, and by occupation a washerwoman. The patient was suffering with neuralgia of the bowels. I prescribed an ordinary full dose of morphia, in combination with sulph. quinia. The pain was not in the least controlled, which led me to inquire into her history, and I asked :

"Who treated you before?"

"Dr. S. waited on me about four years ago."

"Do you know what Dr. S. gave you at that time?"

"Yes, sir; he gave me morphine."

"Well, have you taken any morphine since that time?"

"Yes, sir, I have taken it whenever I could get it; I would walk ten miles for a dose of morphine when I have n't had any for a while."

"How do you get morphine when you want it?"

"Oh! I have the box, with the number of the prescription on it, that Dr. S. gave me four years ago."

Sure enough, she produced a box with a date on it four years old. She had preserved the date and number of that prescription, as she knew the druggist would not sell her morphine without a prescription.

A large number of opium-eaters will tell you that the first step toward the gates of despair was taken under the guidance of their physician. The physician is not to blame for prescribing any of the forms of opium; but the druggist certainly takes a great responsibility upon himself when he repeats a prescription largely composed of opium, for an unlimited number of times.

In a little village in Ohio, not many months ago, in the middle of the night, while the druggist was sleeping soundly, there came a rapping at the door—a rapping that might have awakened the seven sleepers. The village druggist opened the window, and asked, "What 's wanted?"

"Oh, for mercy's sake, go with me to the store and get me some morphine; I'll die before morning if I do n't get it."

The druggist having been annoyed before by the same individual in that way, shut the window and went back to bed.

The poor victim to the use of opium turned away, suffering all the torments of the damned. But it was utterly impossible for the poor man to stay away with that horrible gnawing at his stomach. He had not been gone from the druggist's door longer than fifteen minutes, when the druggist was again aroused from his pleasant doze by the same desperate knock. The druggist went to the window a second time, and told the tormented wretch to go away, that he would not be broken of his rest and furnish him with morphine without compensation any longer.

The wretched sufferer turned away again, constantly gagging, and making fruitless attempts at vomiting, but in a very few minutes returned, for the third time, to renew his pleadings with the druggist. This time with better success, for the druggist dressed himself, and came down to the door. The fact was, he could no longer hold out against the agonizing supplications of this poor wretch, and upon the sufferer's giving sufficient security that the druggist would not lose the price of his medicine, they proceeded to the drug-store.

And, when the lamp was lit, you might have beheld there such an object of utter despair as you never beheld before. The poor victim was jerking in every tendon, and gagging with every breath.

"Let me have twenty grains of morphine," said the sufferer to the druggist.

The amount asked for was weighed and handed to him.

"Now give me six ounces of brandy."

The brandy was furnished as required. To the surprise and alarm of the druggist, the opium-eater emptied the entire twenty grains of morphine into the six ounces of brandy, and swallowed it at a single gulp.

The druggist was alarmed, thinking the man in his wretchedness had taken that enormous quantity with the intention of ending his sufferings forever.

The man with the twenty grains of morphine and six ounces of brandy in his stomach, sat down in a chair. He sat there a few minutes, stretched his limbs, yawned, and got up, with the remark: "I feel better; I think I can sleep a little now;" and walked out of the drug-store, seemingly perfectly well and evidently very happy.

In accordance with the best information I have been able to gather, the largest number of opium-eaters contract the habit from choice, merely for the pleasure of opium—never thinking that the pains of opium will prove to be a hundred-fold stronger than its pleasures, and might fittingly be represented by a death's-head and cross-bones.

The opium-eater gets into his fairy-boat, and drifts out upon the bosom of a lovely stream. The surface of the clear water is unbroken by a single ripple. The pleasant surroundings and soothing motion of the boat invite him to sleep. So he makes himself comfortable, and glides over the land of dreams as smoothly as the little boat glides over the bosom of the stream.

His sleep is delicious and his dreams enchanting, but, ere long, he is aroused from his sweet slumber by the sound of rushing water.

"Ha! it is the cataract. I'm lost!"

He jumps to the oars, and pulls with almost superhuman strength. For a while he holds the boat against the stream, but soon his arms grow weaker, and the little boat drifts on with the hurrying waters, till the despairing victim who occupies it is whirled over the rocks into eternity.

After the opium habit has become firmly fixed, can it be relinquished by the exclusive efforts of the victim?

From the despairing multitude of opium-eaters comes the solemn answer—*never*.

De Quincy commenced taking opium, in 1804, to quiet the pain of rheumatism of the head and face, from which he had undergone the most agonizing pain for about three weeks. In an hour after taking the first dose, he describes the change as heavenly. The pain he had been suffering for three weeks had not only vanished, but it had been replaced by a profound state of peace and happiness, which he never before experienced, even when in the enjoyment of perfect health.

After De Quincy had given up all hope of freeing himself from the destroyer's embrace, he says :

"Twice I sank, twice I rose; a third time I sank. During this third prostration before the dark idol, and after some years, new and monstrous phenomena began slowly to arise. For a time, these were neglected as accidents, or palliated by such remedies as I knew of. But when I could no longer conceal from myself that these dreadful symptoms were moving forward forever, by a pace

steadily solemn and equally increasing, I endeavored, with some feeling of panic, for a third time to retrace my steps, but I became profoundly aware that this was impossible; or, in the imagery of my dreams, I saw, through vast avenues of gloom, those towering gates of ingress which hitherto had always seemed to stand open, now at last barred against my retreat, and hung with funeral crape."

Art. 3.—Puerperal Eclampsia.

By N. H. CHURCH, M.D., Patoka, Ind. A paper read before the Gibson County (Ind.) Medical Society, May 28, 1875.

Mrs. C., æt. 18 years, short in stature, nervo-bilious temperament; had reached the sixth month of her first pregnancy; had been free from pains to this time; was subject to nervous attacks of a spasmodic nature when a child. On the morning of April 11, 1874, at 8 o'clock, I was summoned to make the first visit, Mr. C. stating that his wife was having spasms, and that he feared a disastrous result.

Found patient lying upon the left side with left hand supporting the head. She seemed to be in a comatose condition, within ten minutes after my arrival; pulse 120, respiration 30, and stertorous breathing. After twitching of masseters and a shrug of shoulders, convulsions came on; immediately before which, her fore-arms were pronated, fists closed, eyes fixed, tongue protruded, face congested and livid, and bilious vomiting. These were the indications for the return of the convulsions for the first few hours. The tongue had been badly injured by the teeth before my arrival.

The bowels had been closed for three days prior to morning of attack. As soon as possible after convulsion passed off,

R Chloroformis, gtts. xxx.

Morphæ sulphatis, gr. ss.

M. for a dose.

Only one dose of this was given, and that without much benefit. Upon the approach of next paroxysm, gave an injection of one pint cold water, which, in connection with F. E. valerian ʒj. added to chloroform comp. and given forty minutes after first dose, lessened severity of fit. Before the time arrived for next paroxysm, injection passed away, staining cloth slightly green. Chloroform

per inhalation was now administered to complete anæsthesia, under the influence of which the next paroxysm was deferred twenty minutes. As soon as patient lost the deep effects of the chloroform, the fits returned with greater severity. On examination per vaginam, cervix uteri was found elongated and cone-shaped, with contraction of muscular fibers. The os would not admit the point of the index finger, and was low down in the vagina.

At 2 o'clock P. M., Drs. Donney and Rawlings were called in council. An examination was made, and the following prescribed:

R Hydrag. chlor. mitis, grs. xv.

Ipecacuanhæ pulveris, grs. jss.

M. Ft. cht. No. 3. Sig. One powder every three hours.

In connection with which, was given,

R F. E. gelsemium, gtts. ij.

F. E. verat. viride, gtts. iij. M. for a dose.

To be given in water, repeated every hour, watching effects; mustard to extremities; ice-water to face and head, and patient bled from median vein to extent of one pint or thereabouts.

Fifteen minutes preceding time for next paroxysm, chloroform was resumed, per inhalation, and carried to limp anæsthesia, which condition was maintained two and a half hours without a return of paroxysm. Having passed the hour for the administration of medicine, withdrew the chloroform, and after much trouble succeeded in forcing down the powders. About this time the vein was reopened and another pint of blood withdrawn. Promptly at the hour for the return of the paroxysm it came on severely. Fifteen minutes preceding time for the return of next paroxysm, chloroform was resumed and carried to limp anæsthesia, which condition was maintained four and a half hours.

Patient had two light convulsions after this—the last one at 1.30 A. M. (the 12th), at which time pulse was 140, skin hot and dry, pupils very much dilated, breathing stertorous. Arterial sedatives had been given ad libitum, without perceptible benefit. Second injection passed away staining cloth green. Now gave

R Hyd. chlor. mitis, grs. xx.

Ipecacuanhæ pulv. gr. j. M. for a dose.

Cloths wrung from ice-water applied to face and head. Again put patient under the influence of chloroform. At 2.30, the hour for the return of paroxysm having passed, chloroform was discontinued. Stopped other medicines and left patient resting easy. Called at 8.30 next morning with Dr. Donney. Patient had rested

without return of fits; she was lying in the same position as when first seen. Pulse 96, breathing better, pupils nearly normal; had a bilious evacuation from bowels at 6 A. M. The following was prescribed:

R Hyd. chlor. mitis, grs. v.

Ipecacuanhæ pulv. gr. j.

M. for a dose. To be repeated in four hours, and followed with castor-oil. Arterial sedatives, as before mentioned, two or three hours apart.

Bowels moved once from effects of last dose of castor-oil; stool of a bilious nature. Resumed alterative treatment and arterial sedatives.

9 A. M., 14th. Patient rested moderately well through the night; bowels had not moved from last doses of alterative; ordered castor-oil and repeat if necessary. Oil was repeated without effect. An injection of cold water was ordered, which resulted in three large operations of a bilious nature. Left four capsules, each loaded with

R Quiniæ sulphatis.

Pulveris Dover's aa grs. jss.

Sig. one every four hours.

Urine voided on third day of attack was examined and found to have a specific gravity of 20. Trommer's nitric acid test, without heat, gave a large deposit of albumen. The abundance of albumen was doubtless due to congestion of the venous circulation. I have no doubt if the urine voided on the first or second day of attack had been examined, that albumen would have been found in greater abundance. Authors are agreed that, whenever sufficient pressure is made by a tumor upon the renal vein or the vena cava inferior, to slacken and obstruct the returning circulation to the kidney, the urine is liable to contain albumen. Late authors are also agreed that "the presence of a superabundance of albumen in the blood is one of the predisposing causes of eclampsia, and has much to do with the organic lesion of the kidneys;" also, that the amount of urine increases rapidly during the convulsive attack, and diminishes after the convulsion has passed away. Statistics prove that seven-eighths of the cases of eclampsia occur in primiparous women.

I saw the patient several days succeeding date last named; she attended church on the 19th of same month.

On the morning of May 6th, my father was called to visit Mrs. C., Mr. C. stating that his "wife was in much pain and menses had returned." A sitz bath was ordered, patient to remain in half an hour; in the course of one and a half hours after which, patient was delivered of a dead fetus of apparently six months, and from its condition must have died during the late convulsions of the mother. After abortion, patient did well until December 16, 1874. I was called at 1 o'clock A. M. Mr. C. stated that he awoke about 12 o'clock and found his wife moaning; inquired the trouble; she stated that she "hurt;" he could not elicit further information of her ailment. I found the patient lying upon her back, pulse 96 and full, eyes fixed, pupils dilated to about three lines in diameter, respiration about normal, very great tenderness over abdomen, tossing legs and arms over the bed, trying to push the bed-clothing off, moaning and sighing, uttering broken sentences in monosyllables, almost constant working of masseters, menses stopped for two months. As the symptoms pointed toward a return of former trouble, gave a compound of F. E. gelseminum, morphine, and chloroform, hot bricks applied to feet and body, and cloths wrung from hot water applied to lower portion of abdomen. The latter were illy borne and had to be removed, exciting the patient almost to spasms. Medicine in first perscription having been taken without much benefit, gave

R F. E. gelseminum, gtts. xxx.

F. E. lobelia, gtts. xx.

Aquæ, ʒvj.

M. Sig. teaspoonful every ten minutes.

Four doses were given, when patient sat up in bed and said she must get up. She passed about two pints of albuminous-looking urine—viz., wanting in color, frothy, and surface covered with bubbles. After taking one more dose of latter-named compound, her language was in connected sentences, and consciousness was fully restored. At this time pulse was 90, pupils nearly normal, breathing natural. Ordered hot packs to lower part of bowels and a purgative dose of calomel. Saw her at 1 P. M.; pulse 100, pupils normal, conscious.

Left F. E. gelseminum, gtts. xxx; aquæ, ʒij. M. Sig. teaspoonful every hour. The next day patient called at my office, and I learned that the hot packs and calomel had performed their work.

In several cases of eclampsia which I have treated during the last two or three years, when other medicines have failed to benefit

patient, chloroform was used to anæsthesia with the happiest results.

As far as can be ascertained, but little information has been gained regarding the post-mortem appearances of eclamptic patients. Those who have made the most thorough examinations state that there is no appreciable organic lesion. There is little serosity found in the ventricles of the brain, with more or less congestion of its vessels. If disease has been apoplectic, post-mortem appearances indicate "extravasation into the cerebral substance, or effusion on its surface—the effects, and not the cause of the convulsions."

We ought not to consider all cases of convulsions in pregnant women assignable to albuminuria, nor all cases of convulsions occurring in pregnant women, puerperal.

Art. 4.—On the Value of *Gelsemium Sempervirens* in Facial Neuralgia.

By C. H. NEWCOMB, A.M., M.D., Mechanicsburg, O.

Physicians in a general practice, especially in malarial districts, frequently meet with cases of facial neuralgia, which not unfrequently give much trouble to both patient and practitioner. The very best results obtained by me from the best known remedies, until I began the use of gelseminum, which was about one year ago, was, to me at least, unsatisfactory.

From the results I have been able to obtain from the use of gelseminum in neuralgia, with its comparative cheapness and small amount necessary to be given—no small items to a very large class of physicians who issue their own drugs—I am induced to take from my note-book a few cases in which the drug was used, for your consideration.

Case 1. Hattie G., aged 16; white; attending college; subject to very severe attacks of nervous headache; cause supposed to be hereditary; always took remedies for relief, but had never obtained much relief from previous treatment. Aside from above trouble her general health was remarkably good. January 1st, I was asked to prescribe for her relief from nervous headache, aggravated by traveling on the cars. I gave fl. ext. gelsemini

f. ʒj.; Sig: ten drops to be taken every three hours in a wine-glass of water, until relieved. The first dose gave entire relief, and the attack did not return, though the patient the same day and the following night rode some hundred miles in the cars.

Case 2. Orlando B., aged 32; white; married; greatly impaired constitution; addicted to opium. Patient applied, April 28th, for relief from facial neuralgia brought on from exposure; was suffering from severe pain of right side of lower jaw, with extensive inflammation of entire right buccal region. I gave fl. ext. gelsemini f. ʒj.; five drops every three hours until relieved. Patient reported next day as having obtained complete relief from pain, complaining, however, from slight double vision and drunkenness from the drug. I suspected at the time that the patient took more of the drug than ordered, as he remarked that it took more medicine to affect him than any one else. Besides, he was a drinking man, an opium-eater, and a dabbler in drugs.

Case 3. Samuel M., aged 40; white; photographer; married; constitution and general health not good; habits and mode of life inactive. Patient called at my office April 26th, suffering from tic-douloureux, which he was subject to. I gave fl. ext. gelsemini f. ʒj.; ten drops to be taken every four hours till relieved. First dose entirely relieved the patient, but he also complained of drunkenness, with slight double vision.

Case 4. Mrs. Delilah W., aged 60; white; constitution and general health not good; has been subject to most severe attacks of facial neuralgia for several years, for which patient had taken large quantities of quinia, morphia, iron, and, I presume, arsenic. Treatment so far had been entirely unsatisfactory. Eating always brought on severe pain, and patient remarked, "my teeth are always sore." I was called upon, April 25th, to prescribe for her relief, as patient was then suffering most severely. I gave quiniæ, grs. xij.; opii, gr. j.; divided in three powders, taken three hours apart. Partial relief was obtained only, when I gave fl. ext. gelsemini f. ʒj. Four drops given every three hours. The next day her husband reported entire relief was obtained, and patient had a good night's rest, the first for some time. I then ordered ten drops three times daily until the entire drachm was taken, to prevent a return of the trouble, if possible. Patient's husband reported in the evening that dizziness was complained of, when I ordered the dose to be decreased two drops each dose, daily, until dizziness was not felt. Eight drops was borne

without any unpleasant effect whatever, and was continued three times daily until two drachms were taken, when patient sent word that her teeth were apparently as sound as ever, and free from pain for the first time for years.

Case 5. Mrs. D. H., aged 40; white; married; anæmic. Patient's husband called at my office at 8 p. m., May 2d, saying his wife was almost crazy from facial neuralgia, and could get no relief from local applications, and medicine that had been prescribed for her some hours previous, which I afterward accidentally learned was quinia, morphia, and bismuth. The pain was gradually increasing. I gave fl. ext. gelsemini f. ʒj.; six drops to be taken every three hours until relieved. Patient's husband reported next morning that she obtained entire relief, and had a good night's rest.

Case 6. Charles N., aged 22; grocer; white. Patient called at my office, June 17th, complaining of severe pain in his chin, of three days' standing, and increasing. I gave fl. ext. gelsemini f. ʒj.; six drops every three hours till relieved. Next day, patient reported himself entirely relieved.

Of the above cases, No. 4 was the severest test of the value of the drug, though the relief obtained in case 2 was most unexpected, from supposed ulceration at root of second lower molar, with so extensive inflammation of entire right jaw.

So far, my experience in the action of gelseminum, I think, warrants the belief that it will become a most valuable drug in the treatment of neuralgia, and possibly some other nervous diseases. I think six drops of the fluid extract sufficient as a dose for an adult. I do not think gelseminum can be employed for the relief of pain as opium can; yet its action on the nerves of the head and face for relief from neuralgia, I deem as certain as the action of ergot on the uterus, if not more so.

Art. 5.—Case of Transfusion in Diabetes Mellites.

By C. SHRIVER, Bethany, W. Va.

James Low, æt. 48 years; has been afflicted for the last four years with an excessive flow of urine, containing a large amount of sugar. The quantity was variable in its fluid and solid constituents.

All remedies known to be of use in the disease were tried in succession, and at various times, and without material relief. Opium and strychnia, with iron, seemed to be of the greatest utility.

He became much emaciated, very weak; and a remarkable feature in the case was pain in the flexor muscles of the limbs, very violent at times, so much as to cause loss of sleep. Digestion was imperfectly performed. An hour or more after eating, eructations would take place, having, as the patient expressed it, the taste and smell of "rotten eggs." At times the bowels were constipated. Again, the evacuations were semi-liquid and very frequent, and this would occur without any change in the diet.

Appetite variable—at times good, at others none at all. His mind was confused; at all times very irritable; as he expressed himself, "nothing seemed to go right;" and was very much depressed.

He was in this condition when I proposed to him the operation of transfusion, and not having knowledge of any one of the profession ever transfusing in his disease, the only promise I made to him was that no harm should result from the operation, and that it would probably do him good. If he was willing to bear a little pain for a possible relief, I would try it.

I procured some German glass tubing of proper size, and with an alcohol lamp, aided by the blow-pipe, I blew a bulb half an inch from the tapered extremity of each tube, then inserted the non-bulbous extremities of each tube in a piece of gum tubing of convenient size, about six inches in length, which gave me a good instrument of ten inches in length; and after having used it, I think it the most useful for the purpose that I have ever seen or heard of—very simple and easily constructed, having no stop-cocks, or air-valves, etc., of the more complicated instruments in use, to be troubled with.

On the morning of the 6th of June, I procured a healthy lamb about three months old; took up and ligated the common carotid artery on the left side of the neck; then laid bare the median basilic vein for about an inch, and threw a ligature around it to stop the flow of blood; then, an assistant compressing the artery of the lamb on the cardiac side of the ligature with the common dressing forceps, I made an incision in the artery and inserted the tube. After having allowed a little blood to pass through the tube to expel the air, and while flowing, I inserted the other tube into a similar opening in the vein. Then, having an assistant counting

the pulsations aloud, I let the blood flow while he counted 360 pulsations, and stopped the flow of blood, more on account of the condition of the animal than of the patient, who bore the operation well. As near as I can compute, the quantity transfused was about twenty-five ounces.

Immediately before the operation, the temperature under the tongue was 96° , axillary 95° , respiration 22, pulse 100. Half an hour after the operation, temperature under the tongue 97° , axillary 96° , respiration 21, pulse 92. After dressing the arm, the patient went to sleep and slept soundly for about four hours; he had not slept so well for six months. The third day after the operation—that is, June 9th—the pulse was 88, temperature under the tongue 98° , axillary 97° .

The phenomena observed during the transfusion were, first, oppression of the chest; second, irregularity of the heart's action, pulse rose to 110; third, cough; fourth, vertigo; fifth, perspiration; and lastly, intense pain across the lumbar region, which abated in a few minutes. After he awoke from the sleep spoken of above, he passed about thirty ounces of very dark-colored urine—the microscope showed blood globules, hence the color; but never, at any examination, did the microscope reveal any casts.

The results of the operation were much greater than could have been expected. The patient is gaining in health and strength; appetite good and regular; sleeps well. Formerly he was compelled to arise ten or twelve times during the night to evacuate the bladder. To-day he tells me that he now rises but once. The terrible feelings of depression and weariness of life are gone; the muscular pains are gone; he says he feels like a new man.

This paper is offered to the profession in the hope that they may use transfusion in diabetes in earlier stages of the disease than I have had an opportunity of doing.

Art. 6.—Scarlet Fever in the United States.

A Study of the Mortality Statistics of the Ninth Census, including an inquiry as to the seeming effect of Geographical Position, Temperature, and Altitude on the Disease. By THOMAS C. MINOR, M.D., Cincinnati, Ohio.

[CONCLUDED.]

It will be noticed that in June, July, August, September, October, and April, the six months having the highest temperature, the least mortality occurred; while, in the other six *cooler* months,

more than two-thirds of the mortality occurred. When the last San Francisco health report was issued, the epidemic seemed not to have yet died out, for there were 16 deaths in June, 1874, and 27 in the following warm month of July.

In Providence, R. I., in 1873:

MONTH.	DEATHS SCARLATINA.	MEAN TEM- PERATURE, DEGREE.
January.....	8	27.5
February.....	6	26.9
March.....	5	34.7
April.....	6	44
May.....	10	55.2
June.....	11	64.9
July.....	10	70.6
August.....	12	68.7
September.....	17	60.9
October.....	9	50.3
November.....	15	39.8
December.....	23	29.8
Total.....	132	

Here is an instance where the mortality was greater in the *warm* than in the colder seasons. The month of greatest mortality, however, was a winter month (December). The highest mean monthly temperature prevailed in July, and is about 70° Fabr. The following table shows the deaths from scarlatina by weeks, and the temperature record during the same period. This epidemic of 1873-74 occurred in this city (Cincinnati). The mortality figures were furnished me by Mr. Bart Chapman, clerk of the Board of Health. The thermometrical observations are those furnished by the United States Signal Service Office. The observations commenced in August, 1873.

DEATHS FROM SCARLATINA, WEEK ENDING—	DEATHS OF SCARLATINA.	AVERAGE OF TEM- PERATURE SAME PERIOD, DEGREES.
August 16.....	2	75
" 23.....	5	75
" 30.....	5	76
September 6.....	7	76
" 13.....	5	69
" 20.....	3	64
" 27.....	8	64
October 4.....	18	63
" 11.....	12	56
" 18.....	15	60
" 25.....	36	48
November 1.....	19	44
" 8.....	26	48
" 15.....	31	41
" 22.....	23	38
" 29.....	29	38

December 6.....	20	43
“ 13.....	13	48
“ 20.....	24	41
“ 27.....	28	34
“ 31.....	25	29
Total deaths.....	—354	

The influence of a *high temperature* in August seems to have checked the epidemic tendency; with the falling temperature of autumn, there was a revival of the tendency, and the disease again raged as an epidemic. In 1874, the following condition of affairs existed:

DEATHS FROM SCARLATINA, WEEK ENDING—	DEATHS.	AVERAGE OF TEM- PERATURE SAME PERIOD, DEGREES.
January 3.....	12	51
“ 10.....	26	36
“ 17.....	18	24.14
“ 24.....	23	44
“ 31.....	28	39.86
February 7.....	28	34
“ 14.....	19	41
“ 21.....	20	44
“ 28.....	20	36
March 7.....	19	48
“ 14.....	20	35
“ 21.....	10	52
“ 28.....	20	43
April 4.....	11	41
“ 11.....	12	44
“ 18.....	20	52
“ 25.....	16	52
May 2.....	16	57
“ 9.....	10	60
“ 16.....	16	73.57
“ 23.....	7	60.71
“ 30.....	14	76.29
June 6.....	17	76.86
“ 13.....	11	79.85
“ 20.....	6	77.57
“ 27.....	12	82.43
July 4.....	11	81.29
“ 11.....	13	82.43
“ 18.....	10	78.43
“ 25.....	8	79
August 1.....	17	75.86
“ 8.....	6	75.57
“ 15.....	15	81
“ 22.....	16	80.29
“ 29.....	6	73
September 5.....	10	76
“ 12.....	7	77
“ 19.....	8	73
“ 26.....	8	67
October 3.....	13	61
“ 10.....	10	57.50
“ 17.....	10	52.03
“ 24.....	10	58.86
“ 31.....	13	58.04

November	7.....	5	51.71
"	14.....	9	50.78
"	21.....	11	45.43
"	28.....	9	39.68
December	5.....	3	40.12
"	12.....	9	37.38
"	19.....	8	39.07
"	26.....	9	40.57
"	31.....	2	38.91
Total deaths, 1874.....		—687	

If this table be carefully analyzed and studied, it will be noticed that a high temperature seemed to lessen the mortality from the disease. This epidemic commenced to decline in November and December, 1874, after having destroyed over 1,000 persons, all, with four or five exceptions, under 20 years of age, and the majority of them young children. Calculating the mortality to have been ten per cent., there must have been over 10,000 persons attacked by the disease. Notwithstanding it is claimed by *authorities* on the subject that scarlatina *is not modified by temperature*, I have been led to a contrary conclusion. A study, from this special point of view, of numerous statistics, not included in this paper, has led me to believe that various changes, produced by temperature, serve to influence the disease, and that these changes were brought about only by a very *high temperature*.

The following propositions *may stand*—or fall, if the requisite proof to the contrary be given:

1. *The scarlatinous tendency is but slightly, if at all, modified by a temperature ranging from zero to 65° Fahr.*

2. *The scarlatinous tendency is decidedly modified and lessened by a temperature ranging from 75° to 80° Fahr.*

3. *The scarlatinous tendency is almost entirely destroyed where there is a prolonged high temperature ranging from 80° to 85° Fahr.*

INFLUENCE OF AGE.—The period of life at which the disease seems to react most fatally is shown by the following tables:

Deaths in 1860.

AGE.	MALES.	FEMALES.	TOTAL.
Under 1 year.....	1,435	1,166	2,601
1 to 2 years.....	1,804	1,639	3,443
2 to 3 ".....	2,053	1,833	3,886
3 to 4 ".....	1,754	1,703	3,457
4 to 5 ".....	1,415	1,342	2,757
Total under 5 years.	8,461	7,683	16,144

5 to 10 years.....	3,428	3,721	7,149
10 to 15 "	750	973	1,723
15 to 20 "	287	383	670
20 to 25 "	81	133	214
25 to 30 "	51	93	144
30 to 40 "	54	88	142
40 to 50 "	38	38	76
50 to 60 "	29	29	58
60 to 70 "	21	18	39
70 to 80 "	8	9	17
80 to 90 "	3	4	7
Over 90 "	1	0	1
Unknown.....	9	9	18
Grand total.....	13,221	13,181	26,402

It will be seen that 25,686 of the decedents were under 20 years of age. That the ages of 634 ranged from 20 to 60 years of age, while 64 of the decedents were over 60 years of age. From 2 to 3 years of age, the mortality seems to be greatest. The majority of the decedents were under five years of age.

Deaths in 1870.

AGE.	MALES.	FEMALES.	TOTAL.
Under 1 year.....	1,173	927	2,100
1 year	1,552	1,415	2,967
2 years.....	1,679	1,583	3,262
3 "	1,514	1,416	2,930
4 "	1,201	1,095	2,296
Total under 5 years.	7,119	6,436	13,555
5 to 10 years.....	2,377	2,472	4,849
10 to 15 "	484	656	1,140
15 to 20 "	142	192	334
20 to 25 "	67	95	162
25 to 30 "	31	61	92
30 to 35 "	11	22	33
35 to 40 "	16	21	37
40 to 45 "	14	15	29
45 to 50 "	11	7	18
50 to 55 "	3	9	12
55 to 60 "	4	10	14
Over 60 "	14	19	33
Unknown.....	6	6	12
Gand total.....	10,299	10,021	20,320

It will be noticed that the majority of decedents were under 5 years of age. At 2 years of age, the mortality seems to be greatest. 33 of the decedents were 60 years and over. A careful study of these tables, as well as of other tables, not here included, serves to convince me that age influences, to a great degree, the mortality

from scarlatina. A prognosis in cases of scarlatina may be partially based on the age of the patient.

At 2 years of age, the disease is most fatal. The greatest mortality is among children under 5 years of age. From the fifth to the tenth year, the mortality steadily decreases up to the twentieth year, after which time the susceptibility to the scarlatinous poison seems not to be great. From the age of puberty, and during the child-bearing period, up to the age of 45 or 50, there seems to be *an excess of deaths from scarlatina among females*, as compared to males; and this constitutes too strongly a marked feature to pass unnoticed, for it will be remembered that the male population in 1860 and in 1870 outnumbered the female population. After the child-bearing period, this tendency seems to subside. I have noticed the same fact in studying European scarlatina statistics—notably those of Great Britain. *In other respects, sex does not seem to influence the mortality from the disease.*

INFLUENCE OF RACE AND NATIONALITY.—The following table shows the nationality of the decedents from scarlatina in 1870:

United States—Whites.....	19,099
Indians	11
Colored.....	289
Unknown.....	9
Germany.....	245
Norway, Sweden, and Denmark.....	70
Ireland.....	173
England and Wales.....	180
Scotland.....	28
France.....	8
North of Europe.....	30
Italy.....	1
South of Europe.....	15
China and Japan.....	3
All others.....	159
Total.....	20,320

Foreign-born population, in 1870, was 5,567,229, and 1 out of every 6,105 of these died of scarlatina. Colored population, 4,880,009; 1 out of every 16,886 died of the disease. Native-born white population, 28,120,788; 1 out of every 1,473 died of the disease. We can therefore safely conclude that *scarlatina attacks by preference the white population, the colored population appearing to be but slightly predisposed to the disease.* The census figures of 1850 will make a like showing. Tullock's English Reports confirm the same fact. The relation of nationality to the scarlet-fever mortality is thus stated by that most eminent of American statisti-

cians, Francis A. Walker, M.A.* After giving a table, the writer remarks:

"Now, since 103 deaths in each 1,000, from scarlet fever, to take an instance from the above table, occur under the age of one year, and as but .005 of the population within that period of life are of foreign birth, it will follow, if we assume no more than an equal liability to this disease on the part of this element of the population, that of these 103 deaths, but .515 (fractions being preserved throughout this computation) occur among the foreign children. As 146 deaths additional in each 1,000, occur between the ages of 1 and 2, and as but .01 of the total population within this period are of foreign birth, it would follow [that of these 146 deaths, but 1.46 occur among the foreign children. In the same, we should find that of the 161 deaths from this cause between the ages of 2 and 3, but 2.415; of the 144 deaths between 3 and 4, but 2.88; of the 113 deaths between 4 and 5, but 2.938; of the 239 deaths between 5 and 10, but 8.604; of the 56 deaths between 10 and 15, but 2.408; and of the 16 deaths between 15 and 20, but 1.312 occur among the population of foreign birth, making the proportionate share of the foreign population in the 978 deaths enumerated out of each 1,000 from this disease, but 22.532.

"If we assume the mortality among this element of the population from this cause to be 30 per cent. greater than that of the native population, the contribution of foreign children to the 978 deaths which occur under 20 years out of each 1,000 deaths at all ages, from scarlet fever, would still be but 29.6, leaving even at this extreme assumption, out of each 1,000 deaths from this cause, among all classes, not less than 15.4 deaths among the foreign population above 20 years of age. But as only 22 deaths in each 1,000 from this cause occur above 20 years of age, among all classes of the population, and as the foreign element constitutes but 24.6 per cent. of the total population above 20, it would follow that their proportional share of this latter body of deaths would be but 5.412. Hence we must conclude either that the mortality among the foreign population from this cause under 20 years, must be greater than that of the native population by much more than the 30 per cent. assumed, or else that the mortality from this cause among the adult foreign population is excessive in a most extraordinary degree."

*Transactions American Public Health Association, Vol. I, p. 29. New York, 1875.

We now, in conclusion, turn to the seeming effect of altitude on the disease.

Altitude.—Scarlatina prevails at all altitudes, epidemics occurring at New York, Providence, and Boston, on the Atlantic coast; at Pittsburg, Cincinnati, Chicago, Detroit, and St. Louis, in the interior of the continent; finally, among the mountains of Nevada, and at San Francisco on the Pacific slope. In order to determine whether altitude seems to modify or lessen the tendency to scarlatina, we shall group the States as follows: 1st group. States having average altitudes ranging from 50 to 600 feet, are Tennessee, Vermont, Kentucky, Georgia, North Carolina, Texas, Massachusetts, Maine, Maryland, Alabama, South Carolina, Arkansas, Connecticut, Mississippi, New Jersey, Rhode Island, Delaware, Louisiana, and Florida. Total population of this group, in 1870, was 14,597,384. 2d group. States having average altitudes ranging from 600 to 1,000 feet: Iowa, Wisconsin, Missouri, Michigan, New York, Pennsylvania, Ohio, Virginia, Indiana, Illinois, and New Hampshire. Total population of this group, in 1870, was 21,506,599. 3d group. States having average altitudes ranging from 1,090 to 5,400 feet: Nevada, California, Oregon, Nebraska, Kansas, Minnesota, and West Virginia. Total population of this group, in 1870, was 2,133,316. In these three groups of States, 20,159 deaths from scarlatina occurred—*i. e.*, 3,333 in the first, 15,351 in the second, and 1,475 in the third. If we now analyze these figures, the following is the result:

ALTITUDE.	DEATHS.
150 to 600 feet.....	1 death to every 4,380 of population.
600 to 1,000 "	1 " " " 1,401 " "
1,000 to 5,400 "	1 " " " 1,447 " "

Now, taking into consideration the density of population in the second group as compared to the third, together with the fact that scarlatina, being a contagious disease, should be more prevalent where it has the largest and densest population to prey on, we conclude that *altitude rather favors an increase of the scarlatinous tendency*. In the meantime, it is but fair to state that in the first group we have Rhode Island, Connecticut, Massachusetts, and New Jersey, *the four most densely populated States in the Union*.

Having now treated briefly of the seeming influences exercised by geographical position, season, temperature, race, nationality, sex, and altitude on the disease, we close, merely adding that our *conclusions* are, in many instances, strengthened by statistics not included in this short paper, and are not the result of any preconceived theories.

Art. 7.—A “supposed” Testicle removed from the Vagina of a Hermaphrodite.

By L. RODGERS, M.D., Sandy Hill, Perry Co., Penn.

A curious hermaphroditic case has recently come under my observation, and from the peculiarity of the case, I have deemed it worthy of publication.

Miss H——, æt. 38, of German descent, was brought to my office on August 4, 1875, complaining of having been suddenly seized with a sensation, apparently as if arising from something in the vaginal region having given away. The movements of this substance were perceptible to the patient, and described by her as resembling something rolling around in the pelvic cavity.

After considerable hesitancy on her part, she finally consented to having a vaginal examination made, which revealed the fact of her being a hermaphrodite.

Before describing the operation, I shall proceed to give a further description of the case. She is of medium size, weighing 130; her voice is quite husky, resembling that of a man; sallow complected, and the face is devoid of hair. The mammary glands are absent, while the breast is thickly set with hair. In coming to the external generative organs, we find the mons-veneris thickly set, with hair, the labia majora and minora well developed, and the vaginal orifice comparatively small, scarcely admitting the introduction of a female catheter.

The clitoris is absent, and occupying its position is a fully developed penis, excepting the absence of the prepuce. The penis, in the flaccid state would measure about three inches in length and one in thickness. It is, however, curved downward, there being a web-like membrane extending from the glans to the upper junction of the labia majora, along the under side of the penis. This membrane is about a line in thickness, and arises from the root of the penis like a round cord, and then spreads out like a fan being attached as above stated.

The patient states that when the penis becomes erect, this fan-like membrane draws the penis down, with the glans pointing toward the vaginal orifice.

By introducing a male catheter into the male organ, we find that the urine flows from it, and at the same time I introduced a female catheter into the female urethra, which is under this fan-like mem-

brane. The female catheter also brings urine. And by moving both catheters, I am not positive, but I think there are two bladders, as I am unable to bring both catheters together while introduced, there being apparently a membrane between them. She states that urine is voided from both urinary openings. They are not fistulous openings. The vaginal orifice is situated at the superior junction of the labia externa.

In making the vaginal examination in which I was assisted by Dr. A. R. Rodgers, we dilated the vagina, after which we introduced Sims' bivalve speculum, and found a small tumor in the vagina, which we supposed to be a polypus. It was attached to a long pedicle, which arose from the root of the penis, also being attached to the anterior wall of the vagina by muscular fibers, which were given off along the course of the pedicle.

The patient requested us to remove the tumor, and we accordingly applied a ligature around the pedicle and divided it about two inches from the tumor.

After the removal of the tumor, we made further explorations, ascertaining that the vagina ended in a *cul-de-sac*, the uterus being absent. On inquiry we were informed by the patient that she had never menstruated, but had always enjoyed good health. She also stated to us that in her younger days she had kept company with the male sex frequently. Thus she seemingly had a degree of love for the male sex, which she acknowledged; yet she never had indulged in sexual congress, nor ever experienced a desire for such indulgence, according to her statements.

In examining the tumor afterward, we found it closely resembling a testicle. Its weight was four drachms, including the pedicle; its shape was similar to that of a testicle, and the pedicle was attached to the posterior border of the tumor or testicle. The pedicle was composed of an artery and a cluster of tortuous veins. Along the posterior border of the pedicle we found a hard cord, having a feeling of considerable resistance on pressure, and which we concluded was analogous to the vas deferens. The pedicle was inclosed in a membrane resembling a mucous membrane, which was continuous with the covering of the tumor. A vertical section of the tumor presented all the natural characteristic constituents of the testicle, which it is unnecessary to describe.

The patient stated that she had two sisters who were married and had children. None of the family besides herself had any deformity.

Art. 8.—Cholera Infantum.

By E. E. RIOPEL, A.M., M.D., Cleveland, Ohio.

As there seems to be so much difference in the treatment of cholera infantum, let us reason together, and see if we can not pursue a regular course of treatment, and very successfully too. Now, one says use cathartics; another, astringents; another uses both combined; another, opiates; another says opiates are dangerous. One says the hot bath; another, "cold pack;" another says he alternates "cold pack" with hot baths with success! This is pretty rough on the innocent babes! What do we invariably find in cholera infantum? Hyperæmic condition of the bowels with anæmic extremities. It is true we find other conditions, such as an affection of pneumogastric nerves and general wasting and irritability of the whole body. If now we equalize the circulation, we find immediate relief from all other conditions. The course, then, is simple. Place the child in "cold pack" with hot bricks to the extremities, together with ice drinks and ice injections. This will possibly seem a very strange treatment, but I have persisted in this course with *success*, even in cases that had been abandoned by men who followed the text of authors rigidly. To produce sleep, I use bromide of ammonia as a stimulant to the nerves. The fact is, if once the circulation is equalized and kept there, the child will get along without any other treatment. As the trouble is mostly caused from indigestion, we will find that if any of this source of trouble remains in the stomach, it will be thrown up as soon as the circulation is righted and free perspiration set up. Now, lay the little one away in a dry blanket, and it will go to sleep and wake up in three or four hours with a very different appearance, feeling quite refreshed.

Extirpation of the Parotid Gland.—This remarkable and difficult operation has lately been performed without hemorrhage by Professor Corradi. The gland was affected with carcinoma, and the dissection is stated to have been conducted with great care; the several parotidian and the carotid arteries being tied as they were exposed, and then divided. The separation of the gland from the styloid process, muscles, and deeper lying parts, was effected chiefly by means of a flat metallic spatula, and at certain points the galvano-caustic was employed.—(*L'Imparziale*, No. 1, 1875)—*Practitioner*.

Correspondence.

BOSTON, MASS., *July 6, 1875.*

EDITOR LANCET AND OBSERVER:—It may not be too late to give you a brief sketch of the meeting of the Massachusetts Medical Society, which held its annual session on the 8th and 9th of June. On Tuesday morning, the fellows of the society visited the Massachusetts General Hospital, also the City and Carney Hospitals, to witness surgical operations, and the exhibition of interesting cases in the surgical and medical wards. During the day the various anatomical and historical museums were open for inspection.

At 12 o'clock the society met at the Lowell Institute to listen to the reading of papers.

Dr. R. T. Edes, of this city, read a paper on the treatment of typhoid fever by cold water. Dr. Edes considered this method of treatment at considerable length, favoring its general adoption. The two chief obstacles in the way of its introduction, he considered, were to be found in the disinclination of the patient to subject himself to the treatment, and the reluctance of his friends, and the greater care and labor demanded by it. Neither of these, he thought, were insurmountable. That this treatment has been used before our time, is no argument against it, as we are seeking for truth rather than novelty. The strongest argument against this method is, that it leaves the patient just as it found him; while the best to be advanced in its favor is, that it is one of the most efficient methods of treatment in the whole range of therapeutic agencies. The essayist's conclusions in favor of the water-treatment met with some opposition in the discussion that followed. A very interesting paper was read by Dr. Geo. E. Francis, of Worcester, on the obstetric forceps, as a time-saver; also one by Dr. Geo. H. Pillsbury, of Lowell, taking as his subject the microscopy of the urine. The essayist favored strongly the more general use of the microscope in the diagnosis of disease, as serving to detect obscure links in the chain of symptoms, often so disconnected as to make it difficult to ascertain the true cause of disease; and as affording more certain indications than the oftentimes vague and contradictory statements of the patient. Dr. Leonard Wheeler,

of Worcester, read an interesting paper on the inner surface of the uterus after parturition, embodying the views of the latest writers on that subject.

Dr. F. W. Russell, of Winchendon, read a very lengthy paper on alcohol in some of its pathological and social relations.

In the evening, Dr. C. J. Blake, of this city, made some interesting statements on a new use of the membrana tympani, which were beautifully illustrated with illuminated photographs, upon a screen, by means of a stereopticon.

The morning session of the second day was occupied with the usual business of the annual meeting. Seventy members have been added to the society during the year, and forty-four have deceased. The financial condition of the society is satisfactory. Delegates from several New England States were present to represent their State societies. After the completion of the routine business, Dr. Ira Russell, of Winchendon, read a paper on State inebriate asylums, and the expediency of their establishment. He said that intemperance had been treated almost entirely as a mental and moral disease, its physical character being ignored. He argued that there was just as much propriety in compelling drunkards to remain in places where there was some likelihood of their cure, as of seizing insane persons and shutting them up in lunatic asylums. He was in favor of the establishment of small hospitals throughout the State, each to contain its distinct class of inebriates, and concluded by offering a resolve that it was the duty of the State to establish inebriate asylums for the detention and treatment of habitual drunkards. Dr. Pliny Earle, of Northampton, and Dr. J. E. Tyler, of Boston, expressed concurrence in the views of Dr. Russell, and the former spoke particularly of the difficult position occupied by officers of insane asylums, in the treatment of persons committed to these institutions by the courts on account of extreme intemperance, and yet perfectly sane when they reach the hospitals, or soon after. If drunkards were to be cured of their disease, they must be put where neither they themselves nor their friends can secure their release. Dr. Asa Millett, of East Bridgewater, opposed the establishment of a State inebriate asylum or the congregation of inebriates. He criticised severely the suggestion that inebriates should be classed according to the amount of money which they may be able to pay. He said that if existing institutions are not capable of performing the work of reformation, they should be made so. Dr. Cogswell, of Bradford, was of a similar

opinion. The secretary read a letter from Dr. W. W. Gooding, of Taunton, in favor of the establishment of inebriate asylums. Dr. R. Woodward, of Worcester, said he did not have much faith in the reformation of drunkards. He denied that drunkenness is a disease, and said that the great reason why efforts to reform drunkards have failed is that it has been treated as a disease. A well-regulated home of correction was as good an institution for reformation as any. Dr. Clough, of Woburn, did not think drunkenness entirely a crime, and Dr. Holt, of Lowell, thought it was both a disease and a crime. On motion of Dr. Cogswell, of Bradford, the resolution was laid on the table.

Dr. George H. Lyman, of Boston, pronounced the annual oration, which was received with marked approbation. His subject being, "The Interests of the Public and the Medical Profession." After a few words concerning the origin of the society, Dr. Lyman defended it against the charge of over-conservatism, claiming that new things which were good were ingrafted upon the main trunk. He denied that the society limited free inquiry and independent practice, and pointed to the widely differing methods of treatment by different physicians of the same disease. The restless spirit of the age resented any exhibition of conservatism, no matter where it might manifest itself. The spirit of quackery had tended greatly to diminish that kindly cordiality and confidence which was so potent as an incentive, and it had induced many of those who, nominally belonging to the profession, could not be said to be really of it, so to lower their standard in deference to this state of things is to be little better than the money-getting empiries. The encouragement of this spirit by the public had wrought much detriment to their own interests. The excessive subdivisions now in fashion were not only useless but positively injurious, and if this process of attenuation were to go on, we should soon arrive at that degree of globular dilution which leaves nothing of original strength. Concerning the admission of women to the profession, he said: "First of all, then, we may freely admit the right of women to every educational advantage in all the arts and sciences, in law, theology, and medicine. They not only have this right, but they already exercise it; and if they can attain to the standard required, we need seek no occasion to throw obstacles in their way." He discussed at length the expediency of deciding the question in the affirmative, and also considered the subsidiary question of the manner in which they should receive their medical instruction. His

conclusion was that if women were to be educated as doctors with any prospect of success, it must be effected through the instrumentalities already in operation for the instruction of male students. Dr. Lyman spoke of the large class of irresponsible practitioners which had sprung into existence, and closed with an allusion to several prominent members of the society who died during the past year.

B.

SYRACUSE, N. Y., July, 1875.

EDITOR LANCET AND OBSERVER:—The medical laws of this state require of each party proposing to practice, to hold a diploma from some recognized school of medicine, or, in default, to appear before some county medical society, for examination and license by its board of censors. I inclose you the questions and answers in a recent case of this kind, in one of the southern counties. The applicant had been a student, as he claims, five years, and a practitioner two years in a neighboring state. It will be seen that the applicant presents some novel views in anatomy, pathology, therapeutics, and, in one notable instance, botany. It might be well for teachers and students to study this remarkably scientific paper for future use. For fear some one may be disposed to regard this as a "sell," I will only add that the examination is *verbatim*, as written out on the occasion, by a medical gentleman present.

E. B. S.

In the examination, the first censor wrote the following prescription, and requested the candidate to read it: R Pot. bromidi, \mathfrak{z} iiiss; aqua, iv \mathfrak{z} . M.

Candidate replied, he had never learned these characters at the *end*.

Q. What is the bag of waters? A. A collection of serum in the uterus.

Q. What is it for? A. It is a mucilaginous secretion that lubricates the parts, to make the child go through easy.

Q. What is the shape of the uterus? A. Pear-shaped.

Q. Is the largest part up or down? A. Down.

Q. Where is the placenta? A. In the uterus.

Q. How is it attached to the uterus. A. By a cord.

Q. Suppose you had a case of labor, in which the cervix was dilated, membranes ruptured, and yet head did not advance, what

is the trouble, and what would you do? *A.* Small pelvis, and I would turn the child.

Other questions, as to cystitis, its nature, treatment, etc., are omitted, because while amusing, are sadly wanting in any response.

Q. What are the diseases of the brain? *A.* Typhoid and typhus fevers, neuralgia (neuralgia includes the greater part of the diseases of the brain, *when you get right to it*), brain fever, cerebro-spinal meningitis.

Proposition. We have a man just across the street (patient known to parties), who has paralysis of one side. What is the probable lesion in that case? *A.* Something is the matter of his head.

Q. What? *A.* His liver probably, or stomach, or some other organ, is out of order.

Q. What organs are contained in the thoracic cavity? *A.* Lungs, heart, liver, and spleen.

Q. What diseases are the lungs subject to? *A.* Pneumonia, phthisis, abscesses, bronchitis, trachitis (that's inflammation of the bronchial tubes).

Q. What is the difference between pneumonia and bronchitis? *A.* In bronchitis there is hacking cough, pain in the head, and pain in the bronchial tubes, losing flesh, pulse quick, breathing rather short—and—and—

Q. What would you do? *A.* I would give cathartics, sudorifics, and *solanum tuberosum*, or aconite.

Q. How would the cathartic act in bronchitis? *A.* The bronchitis might be dependent on some derangement of the liver or bowels, and the cathartic would act upon them.

Q. What is a pneumonia? *A.* An ulceration of the lungs. [The rest of the quiz on pneumonia is simply past credulity, and I will not tax you with its repetition.]

Q. How would you treat what is known as a usual case of consumption? *A.* Digitalis, aconite, and rhubarb.

Q. What would the rhubarb do? *A.* It is a good expectorant, sudorific, and febrifuge!

Q. What organs are contained in the abdominal cavity? *A.* Stomach, intestines, colon, duodenum, bladder, ureters, diaphragm, *urethra, and lower extremities.*

Q. What is peritonitis? *A.* Inflammation of the lining membrane of the cavity. . . .

Q. What diseases are the heart subject to? *A.* *Heart disease.*

Q. What is the difference between organic and functional heart disease? A. They are about the same. It's function in the commencement, and becomes organic in time.

Q. What part of the heart is affected in functional disease. A. The lining membrane.

Q. What would be your treatment for "*heart disease?*" A. Oh! cathartics, etc., just the same for the one as the other. . . .

Q. What is physiology? A. The manner of ascertaining diseases.

Q. What is pathology? A. Pathology is anatomy and physiology—

And so on for quantity.

BEREA, O., August 11, 1875.

EDITOR LANCET AND OBSERVER:—Please correct the error of last issue about in the following terms:

In "Therapeutic Reminiscences," two disagreeable errors occurred. The first, concerning the strychnia, occurred thus:—twenty-five years ago Dr. J. P. Kirtland published a formula, recommended to be used in marked intermittents. The formula was strychnia, gr. j. to the fl. ʒj of solution. The same has been used by me ever since, without ever taking notice that the Pharmacopœia contained any other.

The formula reads morph. murias. grs. v. The intention was, grs. 1½, as the following paragraph shows.

Yours truly,

ALEX. MCBRIDE.

On the Use of Salicylic Acid in Obstetric and Gynecological Practice.—Professor Crede gives a short note (*Archiv für Gynäk.*, Bd. vii., Heft 3) on the use of salicylic acid in gynecological practice. He has employed it for the last six months, on recommendation of Prof. Kolbe, instead of carbolic acid, as a disinfectant for the hands, as a vaginal injection in puerperal women, and for sprinkling over puerperal ulcers, etc. The strength of the solution is from 1 in 300 to 1 in 900, or as a powder mixed with starch, 1 in 5, or it may be used as salicylic-acid wool. Most favorable results have followed its employment, and Prof. Crede desires strongly to recommend its use in midwifery practice.—*Obstet. Journ. of Great Britain*, July, 1875.

Editorial.

"*The Presbyterian Hospital*.—We are glad to learn that the board of governors of this hospital, at a recent meeting, determined to adopt measures which will lead to an amicable and satisfactory adjustment of the unfortunate differences between the medical staff and certain members of the board, in October. There is reason to believe that an excellent understanding will be arrived at between the board and the original staff, and that they will work together harmoniously in future."—*N. Y. Med. Jour.*

The action on the part of the board of governors of the Presbyterian Hospital in New York, indicated in the above paragraph, illustrates the moral power possessed by the medical profession when exercised in a proper direction. We have not had similar results in regard to the action of the board of trustees of the Cincinnati Hospital, simply because of a lack of active interest on the part of the profession in this city, and yet from careful inquiry among members of the staff, college faculties, and others, we have not heard one single sentence of approval of the method pursued in dismissing an honorable member of the staff, at what is termed the annual staff organization. Nor are we surprised that the board of trustees have kept silence, when publicly criticised for their gross act of injustice.

Dr. Cilley has informed us that he was only paid fifty dollars for services during the year 1874. Was the other five hundred and fifty dollars a part of the true inwardness of the financial management that caused a debt of \$14,000? In looking over the fourteenth annual report we find a number of discrepancies in amounts. For instance, on page 23, we find, under the head of stable expense account, \$828 charged to board of horses; on page 25, table No. 7, paid to John P. Epply, for board of horses, \$844.10. The immense city stables and smith-shops are but a short distance from the hospital, which, we are told by the daily press, are not so full but that room is found to accommodate horses belonging to private individuals. Why are there no stalls for the horses used by the city hospital, and that belong to the city, thereby materially cutting down an item of \$1,000?

Table No. 6, purports to give the items of expenditures and prices. Table No. 7 purports to be a "showing of the amount and to whom money was paid during the year 1874." According to our way of thinking, those tables should balance, but they do not, notwithstanding the amount of \$5,760.10 was paid to H. M. Jones for *sundries*—a hem! Why such discrepancies were made as we find in the ice-account is, to say the least, sort o' queer. Under head of general expenses, 152,195 pounds of ice are charged at \$1,407.50; while table No. 7 says, "paid Cincinnati Ice Company, for ice, \$760.98." Does the difference constitute a part of the superintendent's bill for sundries?

We also find \$422.50 paid for sprinkling the streets with water furnished by the city; \$56.35 paid for newspapers—of course those papers are used for the cure of the sick, for surely the officers of the hospital are able to do like other people in such matters. Let a spirit of actual reform take possession of the trustees of the Cincinnati Hospital, and we have not a particle of doubt but that they can cut down the expenses of that institution to less than \$60,000 per annum, and that without injury to the sick. Other items than the above might be specified where a little inquiry would do good.

We would also like to know why it is that the supplies of medicines and groceries are nearly all purchased from retail houses? And we are reliably informed that retail prices have been paid for articles that would have been sold at a lower rate by wholesale dealers. A little investigation of the system of book-keeping and purchase of supplies at the Cincinnati Hospital, it seems to us, might do good. Even the account of death rate does not balance. The secretary reports, on page 6, a mortality of 18 pay-patients; on page 8, the superintendent reports a mortality of 17 pay-patients, and again, on page 11, he reports a mortality of 18 pay-patients.

Now did we not know from actual observation, that the truly good man that presides over the *Gazette* is still with us in bodily form, we would have been led to believe that he had been so unfortunate as to become an inmate of the pay department of the Cincinnati Hospital, and while there, was, like Enoch of old, translated to that bourne from whence no traveler returns, thus causing a discrepancy of count. Or was it a case like the following: In a city not outside the State of Ohio, a child fell out of a third-story window, and being knocked senseless, the coroner (whose office was close by) was summoned. He came, and impaneled a jury that sat

on the body, heard the testimony of witnesses, and brought in a verdict in accordance with the supposed facts in the case, and were dismissed with orders for their fees. The undertaker was next sent for, who came, and the weather being warm, began to surround the body of the child with ice, when, lo, and behold! the child began to breathe, opened its eyes, cried, and did not there and then die. Now a similar case may have happened in the Cincinnati Hospital during the year of our Lord 1874. The probability is, however, that the unfortunate individual had an original method of departure for the spirit-land between counts, only known to the managers of the Cincinnati Hospital.

LA GRANGE, OLDHAM CO., KY., August 1, 1875.

DEAR DOCTOR:—The medical men of Oldham and adjoining counties held a meeting at La Grange, on the 3d Monday in July, ultimo, at which, among other matters of professional interest, they took up the subject of the *financial condition* of the profession, especially among our village and country physicians.

The conclusions arrived at were, in substance, as follows, viz :

That the village and country doctors in Kentucky are not realizing, on an average, more than from fifty to sixty per cent. of their medical bills, in cash or its equivalent. And that the reason for this great loss is mainly their *loose and negligent* manner of collecting their bills, and of not requiring their patients to settle up their medical accounts promptly.

While the grocery-keeper, the dry-goods merchant, the shoemaker, and the farmer have adopted the "*cash system*," or its equivalent, the medical profession are still running in the *old rut* of crediting out their practice to Tom, Dick, and Harry, for *months and years*, without getting a cent or even a *promissory note*, except as a patient may happen, once and a while, to come up and pay.

The medical profession is thus brought down to *financial distress, poverty*, and all their attendant evils, while all other callings of our country, are, as a rule, promptly remunerated, and are moving on in ease and comfort.

Our wives and children, in many instances, are thus made to suffer privations, while our *time, our learning, our skill*, and our *bodily energies* are being lavished on others who neither pay us nor appreciate our services as they should.

If we need a piece of meat, or a barrel of flour, or any other of the necessaries of life, the *cash is demanded*; but when we are

called out at the dead hour of the night, amidst *storms, mud, and ice*, to relieve the sufferings and save the lives of our neighbors, we are expected to wait months. and sometimes years, without a cent of remuneration, and too often we never receive a cent of money for these arduous services. Any one with half an eye can see the result of such a business as this.

We feel that this *glaring injustice* to ourselves has gone too far *unchecked!*

Therefore we most earnestly solicit that you, with every other professional brother in striking distance, meet with us in solemn and serious convention, at La Grange, on Tuesday, the 17th day of August (present month), for the purpose of consulting together on our financial difficulties, and of uniting upon some *sure method* of collecting our bills at regular and short intervals, and of thus placing ourselves upon an equal footing with the other trades and callings of our country.

This matter rests solely on our shoulders, and we can not correct these evils without the co-operation of every doctor in the country.

We therefore call upon every doctor to come up to this convention, and show his *honor and manhood* in sustaining the *independence and dignity* of his profession.

The convention will meet at 10 o'clock A. M., at some one of the public buildings in town, which will be selected in proper time.

Done by order of the meeting.

DR. S. P. BRYAN,	} Committee.
DR. F. L. YEAGER,	
DR. N. B. WELLS,	

DR. D. JOHNSTON, *Sec'y.*

DR. J. R. TIMBERLAKE, *Prest.*

We are in receipt of the above circular. It means pelf—yea, more pelf; it has pelf running all through it from the beginning to the end, and to all of which, we say amen, for verily pelf is a good thing to have. It is useful both in the house and out of the house; it makes a man's clothes fit better, keeps his wife, bairns and horse shod; it greases all the cogs, reduces friction to a minimum amount, smoothes'out the crows' feet, and keeps off wrinkles. As a hypnotic, it is generally more efficacious than opium; as a nervous sedative, it is twice as good as bromide of potash or asafetida; as a tonic, it can't be beat; as an aphrodisiac, it will straighten up the most worn-out old *roue* in less than half the time it would take under full doses of damiana or phosphorus. It is the most soothing panacea

that was ever applied to a weak back. Piles—of pelf are good; they assist digestion; in fact, are an indication of general good health.

For the instantaneous relief of intense pain caused by tick, we can conscientiously recommend pelf; it is altogether superior to deep injections of cloroform, and any sloughing that may be produced is of a laudable character. The virtues of pelf, when made into a plaster that will stick, are past all comprehension. Get some and try it.

The idea that a young man is to spend years of time and probably all his money in acquiring a highly honorable and dignified profession, and then to have his dignity braced up with an empty stomach or one filled with husks, is all bosh. Pelf is the only remedy. If you have earned some, make your demand for it at once. Your patrons are just as much in duty bound to pay you as soon as your services are rendered, as they are to pay the grocer, carpenter, blacksmith, or farm-hand, and no more; neither has a right to be recognized as a preferred creditor over the other. Credit means unpleasantness, loss, and probably ruin. Cash means adipose, a happy wife, and rollicking babies.

There is nothing unprofessional in the act of suing a man for your dues, if he is able to pay and refuses to come down with his pelf in any other way. Nor is it a violation of the code of ethics to accept a retaining fee, either large or small.

It is in violation of the code of ethics to accept a contract to attend a man or set of men by the month or year—at least it seems the doctors of New Orleans have made a discovery to that effect. By the way, that is one of the things we fail to appreciate in that otherwise admirable document, the code of ethics adopted by the American Medical Association.

Every attorney in the employ of a corporation by the year, every clergyman employed by a church to preach for a stated salary, or to edit a paper or magazine by special contract, and every health officer employed by a city or state, fractures the principle set forth in the code of ethics, and is just as culpable for violating a professional law, as the man that agrees to give his professional services for a stipulated sum, to a set of men who have organized themselves into a society for mutual benefit or other purpose. No other profession or calling pronounces its members as unworthy and not respectable because they choose to give their services for a regular salary. And just why that clause was inserted in the code

of ethics adopted by the American Medical Association, has been to us past finding out. So far as financial treatment is concerned, physicians should regard themselves as on a plane with other men, in any other honorable business, expecting neither greater nor less favor.

The custom of physicians offering and giving gratuitous service to public charitable and eleemosynary institutions, we believe has greatly injured the medical profession at large. It has taught the people to believe that physicians value their services at a very low rate, or these places would not be sought after with the greed of a cormorant. When and where do you ever hear of an attorney offering his services or giving them gratis to a benevolent institution? Or how long will a clergyman preach to a congregation, be the people ever so poor, without financial reward? Or where is the pedagogue so philanthropic as to give his spare time to the instruction of poor children without a tangible recompense? In contrast behold the prevailing custom of the medical profession. They compose the visiting staff and do the most onerous professional work connected with every city hospital in the land, without money and without price. Is this right? Is it just? We know that many persons perfectly able to pay a physician's fee are in the habit of going to hospitals or dispensaries when they need the services of a physician. The gratuitous services of the best physician in any city are to be obtained in that manner, and are consequently taken advantage of by the knowing but unprincipled class. A reform in the direction indicated, we believe would be not only advantageous, but would add greatly to the dignity of the great medical profession, and would not detract from its usefulness.

Gentlemen of the medical profession in Oldham and adjoining counties in Kentucky, you are on the right track. Go ahead and just so surely will the Lord take a liking to you. Solemnity is good, seriousness is good; and dignity is good, but when these graces are honestly earning and getting pelf, their value is inconceivably enhanced.

Married.—At the residence of the bride's mother, in Pittsboro, Indiana, July 21, 1875, Dr. Alfred N. Towles, of Danville, Indiana, to Miss Ruth McVey.

Translations.

Review of Foreign Journals.

By HENRY ILLOWY, M.D.

A new salve for the itch: R Styra^x; flor. sulphur; cret. præpar. aa 16 grms.;* green soap,† axung aa 32 grms. M.

This ointment is of a greenish-yellow color, of good consistence, and of an agreeable odor. The patient applies the ointment at night before going to bed, taking good care to rub it in thoroughly over those parts where the acari are usually found. These inunctions are repeated for two consecutive days; the patient can go about his business through the day; at the end of three days the patient takes a full bath. For infants at the breast, an equal part of simple cerate is added to the ointment.—DR. WEINBERG, in *Wiener-Medic. Wochenschr.*

COMPRESSION IN THE ABDOMINO-ILIAC REGION AS A MEANS OF TREATMENT FOR HYSTERICAL ATTACKS.—According to M. Charcot, who has lauded this method very highly, compression made with the hands over the abdominal region corresponding to the ovaries, will almost instantly arrest the most violent attack of hysteria.

In this regard, Dr. Caffé reports, in his journal, the following interesting facts:

More than thirty-five years have passed since I witnessed, with Prof. Chomel, a most violent attack of hysteria in a young woman of high social position, thwarted in her marriage projects. The very learned clinician (who was at the same time the family physician) immediately advised me to make compression with both hands in the iliac fossæ of the patient. The attack promptly subsided through the compression of the aura hysterica.—*La Tribune Médicale.*

PHYSIOLOGICAL AND THERAPEUTICAL EFFECTS OF THE MONO-BROMIDE OF CAMPHOR.—Dr. Trasbot, professor of the school of Alfort, had experimented with this agent on animals, and the re-

* 1 gramme equals 15½ grs.

† Soft soap of the druggist.

sults obtained were not in accordance with those observed by M. Bourneville.

He administered the bromide of camphor to dogs afflicted with epilepsy and chorea, and did not obtain the least sedation in the nervous symptoms. The dose, at first 10 centigrms., was raised to 50 centigrms., and even to one gramme, for the dog. In another series of experiments, instituted to study the action of the mono-bromide of camphor, he did not observe the least somnolence, or the least lowering of pulse or temperature. This medicament has, on the contrary, in doses of 50 centigrms. to 1 gm., always produced very manifest phenomena of excitation, and true convulsive attacks, very much like those determined by strychnia. Therefore, after these experiences, the mono-bromide of camphor should be regarded as a "poison tetanisant" (a poison inducing tetanic spasms).

M. C. Paul tried the bromide of camphor in a case of convulsive hysteria, but neither the number nor the severity of the attacks were in the least modified, even after the patient had taken the dragees made by Clin for a month. On the other hand, envelopment in a dampened sheet gave the most satisfactory results.

M. Dujardin-Beaumetz tried the mono-bromide of camphor in thirty cases of hysteria, epilepsy, and troubles of the genito-urinary organs. No satisfactory result was obtained in the cases of epilepsy; in the cases of hysteria, some slight modification, but nothing of importance. In cases of spermatorrhea, however, it proved a most efficient remedy, in doses of 10 dragees (of Clin) of 10 centigrms. each, taken in twenty-four hours. In this affection it seems to act more through its camphor than through its bromine.

M. Gubler used the mono-bromide of camphor without success in four cases of hysterical convulsions and uncontrollable vomiting of hysteric nature.

Increasing doses of 2, 4, 6, and 10 dragees, even 1 gm., produced no amelioration; the convulsive seizures and the vomiting continued. Some patients complained of a feeling of heat in the epigastrium, and they had some little fever, with general excitation.—*Proceedings Societe de Therapeutic, La Tribune Medicale.*

TREATMENT OF PITYRIASIS CAPITIS AND ACNE OF THE FACE—METHOD OF DR. LAILLER, PHYSICIAN TO THE HOSPITAL ST. LOUIS.
1. *Pityriasis Capitis*. If the patient be a male, he should, before all, have his hair cut sufficiently short; if a female, we must

content ourselves with well separating the hair, and making the topical application by means of a soft brush or sponge. The solution to be used is prepared as follows: Take of the rind of Panama* wood, about the size of the hand, boil in water till reduced one-fourth; remove and let it cool a little, then add 100 grms. of alcohol. The solution thus obtained will be sufficient for two applications per week to the hairy scalp. If the hair fall out very much, it is absolutely necessary to sacrifice it. M. Lailler completes the treatment, by ordering a quantity of the balsam of opodeldœc of about the size of a hazel-nut, to be rubbed upon the head, morning and evening; through its aromatic properties it excites and animates the hairy scalp. The soap and ammonia that it contains soften or dissolve the sebaceous coating of the head. It should not, however, be employed unless the hair is cut very short. It prevents, like all saponaceous substances, the inconvenience of pasting and agglutinating the hair together, which, especially in women, is not without its inconveniences.

2. *Acne of the face.* The method of treatment that Dr. Lailler prefers is that of hebra. Before retiring at night, the face is gently rubbed with black soap;† a light layer of the soap is allowed to remain on the face over night. In the morning, it is removed with warm water. The inunctions are repeated for four consecutive evenings. They are then suspended, and for four consecutive days a vapor douche is taken on the face. After that, friction with the soap; then vapor douche; and so on, until a complete cure. The duration of the treatment is at least six weeks. It does not cure in every case; but in every case in which the patient has the courage and perseverance to pursue it steadily, it modifies very advantageously the cutaneous affection. The applications of the soap promote inflammatory action, which at times is very painful. The face becomes redder, swells somewhat, and more acneous pustules are developed thereon. The vapor douche determines epidermic exfoliation. After several of these inflammatory spurts, the skin becomes less sensitive to the action of the soap, and the appearance of the face becomes very much improved.

Persons in whose face the skin is very sensitive should not make the soap applications for more than two consecutive evenings; and, if necessary, must not resume them at shorter intervals than five or

* Of the species *saponaria*—soap bark.

† Soft soap, prepared by druggists.

six days. The inflammatory action is absolutely necessary to a cure.

To sum up, except in exceptional cases, the following is the line of treatment: Frictions, four days; douche, four days; the whole process repeated five or six times. For persons living in the country, who can not have the vapor douches, Dr. Lailler used instead emollient lotions, such as a decoction of bran or aqua amyli. —*La Tribune Medicale*.

TREATMENT OF MIGRAINE.—M. Hervez de Chegoin considers migraine a neurosis of the great sympathetic, causing dilatation of the arterial vessels of the encephalon, and of the face during an attack, and thereby compression of the cerebrum and other organs. There are three distinct elements to be distinguished in this singular disease—the intermittence, the pain, and the arterial dilatation. To meet these indications he prescribes the following pill:

R Quinia sulphat.	0.05 grm.	} $\frac{3}{4}$ gr.
Tannin,	0.05 grm.	
Aconitin,	0.001 grm.	

M. f. s. a. 1 pillul.

One pill to be taken daily.

Some patients having of themselves taken three or four of these pills, have obtained marked success.—*Revue Medico-Photographique*.

GONORRHEA, VERY SIMPLE TREATMENT FOR—M. BEDOIN (*Annales de la Societ. Medico-Chirurg. de Liege, année 1874*).—M. Bedoin has but little confidence in cubebs or copaiva. He has used with success the following treatment: In the inflammatory stage, baths, full or only half baths in warm water; a decoction of linseed as a drink; low diet as regards food, and total abstinence from drink.

If the patient have painful erections, he prescribes opium and camphor; tartar emetic in solution, (5 ctgr. to a litre of fluid), which is most efficacious—more especially, however, potass. bromide, in doses of 1 to 2 grms. in infusion of orange leaves, to be taken at bedtime

The inflammation having subsided, he makes five or six injections per day, with the following solution:

M. Tinct. sulphat.	- -	} aa grm. 20.
Plumbi. subacet crystall.		
Aq. distill.	- - - -	100 grm.

M. The bottle must be well shaken every time the solution is used.

As the discharge diminishes, the number of injections is reduced to three daily, then two, then one, until the discharge has completely disappeared. A little wine is allowed—to be increased gradually.

On making the solution, a double decomposition takes place producing acetate of zinc and sulphate of lead—the former acting as the astringent; the latter playing the role of insulator, as regards the walls of the canal, which it coats.

In his table of statistics, M. Bedoin gives seventy-two cases that came under his observation within a period of six weeks. Of these, fifty-three were completely cured.

Several rebellious cases (not in the fifty-three), that were not relieved by this method, were cured by Paillason's method. This method consists of insulating the walls of the urethra, and of obtaining a prolonged contact of the remedial agent employed with the canal. The injection is therefore a solid one, that will tarry in the urethra, instead of a fluid one that only passes through. The agent employed is glycerine and amylum, to which may be added such other agents as tinct. sulph., tannin, etc.—*Revue Medico-Photograph.*

Professor Gaillard, Editor *American Medical Weekly*, of Louisville, Ky., in the issue of August 7, speaks as follows of Dr. Morse's Reports to the Ohio State Medical Society:

“By reference to these reports it will be seen that there is represented in them much of all that is known on the subject of Dipsomania, while the literature of General Paralysis is quite fully presented. There is no other book known to the profession that treats the subject in the same way, or that gives more of it. Dr. Maudsley, of London, England, says: ‘It is very valuable, containing so much in so little space.’ The report on ‘Monomania’ defines Instinct, Intuition, Consciousness, etc. It is both metaphysical and physiological, which is the only true method of mental study. Dr. D. A. Morse, of London, Ohio, the accomplished author, has made these and kindred subjects his study for many years, and he gives the result to the public in a most readable and instructive manner.”

Selections.

ON LOCALIZATION OF FUNCTIONS IN THE BRAIN.*

BY C. E. BROWN-SEQUARD, M.D.

The subject upon which I shall have the pleasure of speaking to you to-night is that of the localization of functions in the brain. The general principle that parts exist in this organ which serve for definite functions is now pretty generally admitted, and the question remaining to be discussed is, therefore, whether or not such parts have as yet been found. As is well known, it is to two German physiologists, Fritsch and Hitzig, that is due the discovery of facts which have led to the reopening of this question. Hitzig and several other observers have published pathological facts which are in harmony with the apparent results of physiological experimentation. This attempt to establish on these two classes of facts a theory according to which certain parts of the fronto-parietal convolutions of the brain are the centers for the voluntary movements of definite groups of muscles has been warmly supported by many distinguished observers, and among them my eminent friend, Professor J. Charcot, of Paris. Before I try to show that this theory ought to be rejected, and that the facts on which it is grounded ought to be explained in a different way, it may be well to say a few words about another theory of localization which has been germinating in my mind for twenty years, although it has assumed a definite shape only within the last two years. The facts upon which this theory is founded are the following: You will all remember that I have often taught in this room and elsewhere that the character of the symptoms in brain-diseases is not in the least dependent upon the seat of the lesion, so that a lesion of the same part may produce a great variety of symptoms, while on the other hand the same symptoms may be due to the most various causes, various not only as regards the kind, but also the seat of the organic alteration. In view of these facts, I have been led to believe that lesions of the brain produce symptoms not by destroy-

*A lecture delivered in the rooms of the Boston Society of Natural History, June 1, 1875.

ing the function of the part where they exist, but by exerting over distant parts either an inhibitory or an exciting influence, or, in other words, either by stopping an activity or by setting it in play. This implies the existence of localized functions, but it does not in the least imply that the localization is such as is supposed to exist by Hitzig, Meynert, and others. If we suppose that each of these functional centers is located, not, as these physiologists admit, in a cluster of cells all collected in a certain space or a limited and well-defined part of the brain, but in cells very widely diffused through that organ, we can easily explain all the facts that are furnished by experimentation on animals and by clinical observation. With this theory we can easily understand why considerable lesions in the two sides of the brain may not be followed by the loss of any function, while it is impossible to reconcile such a fact with the former theories of localization.

If we further admit the view I have held for years that one-half the brain can perform all the functions of the two halves, we can easily understand that in cases of a lesion confined to one-half that organ, if it extends through the whole of that half, there may be a persistence of all the cerebral functions (as regards voluntary movement, sensibility and intelligence).

According to the theory that cells endowed with one and the same function are scattered in the brain, it is very natural that the effect of even a most extensive lesion should be only to diminish the number of the cell-elements which have to perform the various functions of the brain, without entailing the loss of any special function.

There is, however, another point which needs to be explained; and that is, how it can be that disease in one part of the brain should destroy the function of distant parts. There is a large number of facts bearing upon this branch of the subject; we know now that disease in the hemispheres of the brain may be followed by alterations of nutrition in the pons Varolii, the medulla oblongata, the spinal cord, the nerves, the muscles, the skin, the joints, and even the lungs (œdema, emphysema, hemorrhage, or disturbances of the circulation), and further that these alterations in circulation and nutrition may come on with great rapidity, and that they stand in no constant or definite relation, as regards either character or position, to the lesions in the brain by which they were produced. In view of such facts as these we can easily conceive that a disease of any part of the brain should bring altera-

tions in circulation and nutrition in other parts of this organ itself, and thereby a loss of this or that function. Besides, as we know that an irritation, however able sometimes to produce changes in distant parts, may in other cases fail to produce them, we can easily understand that a lesion in one part of the brain will sometimes produce symptoms and fail to produce them in other cases.

Let us now leave this part of the subject, and pass to the well-known experiments of Fritsch and Hitzig, the results of which, although not absolutely constant, as I have found, are yet sufficiently so to claim our close attention. Admitting, which is not quite proved, that the current acts locally and not by propagation to other parts, as ably maintained by my ingenious friend and pupil, Dr. Dupuy, it is not yet definitely settled whether the muscular movements produced in these experiments are due to the irritation of the gray matter, or of the nerve fibers, of the cortex cerebri. My friend, Professor Rouget, on anatomical and physiological grounds, inclines to the latter view. Whatever may be the truth about that special point, there are several decided obstacles to admitting the conclusions which have been drawn from these experiments; one of these is that the parts, through the galvanization of which these movements are caused, are the will-centers for such movements. In the first place, these supposed centers are not situated in homologous parts in different animals, cats and dogs for example, a fact which evidently is a fatal objection to the theory. In the second place, these centers do not differ in size in the same proportion with the muscular masses to which they correspond; one small muscle, for example, the orbicularis oculi, which in bulk is certainly not even the hundredth part of the mass of muscles of the anterior limb, has a center (pointed out by Fritsch and Hitzig) which, according to my experiments, is five or six times (in the dog) as large as the center for the muscles of the anterior limb, so that the center for the orbicularis is, proportionally to the mass supposed to be moved by it, five or six hundred times as large as it should be. In the third place, according to Ferrier's researches, we find that instead of one center the orbicularis has three in dogs and cats, and that the sterno-cleido-mastoideus has from three to five centers, and that these various centers for one muscle are wide apart one from the other.

Besides, Vulpian has injected the chemically inert lycopodium powder into the cerebral circulation, with the effect of choking up the vessels of the cortex cerebri, whereby we should expect that

the function of this organ would be destroyed; nevertheless, by galvanizing it, Vulpian succeeded in obtaining the muscular movements so often referred to almost as distinctly after as before the operation.

Hitzig has found that the destruction of these supposed centers causes a paralysis of the parts which are moved when galvanism is applied to those centers. This sometimes occurs, it is true; but sometimes it does not, and when it occurs it is not permanent. In one case, one of the best observers of our times, Professor Rouget, after producing paralysis of the anterior limb by destruction of the cortical center of the opposite side of the brain, found that when the similar center on the other side of the brain was destroyed, there was (instead of a paralysis of the anterior limb yet free) the cessation of the paralysis produced by the first lesion.

If paralysis in the case of the extirpation of a part of the brain depended, as Hitzig and other localizers suppose, on the loss of the center for certain voluntary movements, it is clear that in Rouget's experiment the paralysis should not disappear as it did after the second operation, but that, on the contrary, a paralysis of the other anterior limb should have appeared. But if we admit that paralysis is due to an inhibitory influence exerted by the irritation of the parts surrounding the so-called "center" first extirpated, we can easily understand that a similar irritation, coming from the other side of the brain, destroys the effect of the first. The irritation of the big toe, as I have shown, will produce an inhibitory influence on the nerve-cells of the spinal cord in certain cases of inflammation of that nervous center, while the irritation of other parts of the foot will stop that inhibitory action and allow the inhibited nerve-cells to become active again. But, whatever be the true explanation of the fact observed by Rouget, it is most decisive in showing that the part of the brain extirpated is not, as supposed by Hitzig and others, the center for certain movements of the anterior limb.

Another important fact is that if we take away not only the pretended psycho-motor center of a limb, but besides that part a good deal of the surrounding substance of the same half of the brain, we frequently find that there is no paralysis appearing. If Hitzig's views were correct we should then have a more extensive paralysis than there is in his experiments, as not only several of the supposed psycho-motor centers are taken away, but also the intervening parts of the brain, which several writers have con-

sidered as being vicariously able to replace the missing centers. I know that it may be said that the other half of the brain then performs the motor function of the injured half. But what becomes of this explanation *in extremis*, when we find that the simultaneous ablation of the pretended psycho-motor centers on the two sides is not followed by paralysis? The celebrated experiment of Flourens, consisting in slicing away the two halves of the brain from their anterior parts toward the pons Varolii, has long ago shown that a great deal of the substance of the cerebral lobes can be taken away without the appearance of paralysis.

Charcot, J. H. Jackson, and others, in support of the theory I am now criticising, have brought forward a number of pathological facts. My former assistant, a distinguished pupil of Charcot, Dr. R. Lepine, in a thesis on localization in diseases of the brain, has given a drawing of a brain on which five black spots show the places of disease in as many cases, in most of which convulsions occurred chiefly or only in the arm on the opposite side. These five places are considered as corresponding to the supposed psycho-motor centers of the thoracic or abdominal limbs discovered by Fritsch and Hitzig. I wonder at this conclusion; for, if we were to admit that convulsions in those cases depended on the irritation of such centers, they would in the brain of man occupy a proportionally very much larger part of the convolutions than in dogs, cats, and monkeys. Besides, in most of these cases there was disease in other parts of the brain.

But if these facts were in the most perfect harmony with all the requirements of the theory, they would only show that *sometimes* a lesion in certain convolutions of the brain can produce convulsions either in the arm or in the leg on the opposite side. If we study a very much larger number of cases than those mentioned by Lepine, we find that on the one hand the pretended psycho-centers for the arm or for the leg, are often diseased without the production of convulsions, and, on the other hand, that many other parts of the brain can, when injured or diseased, produce convulsions either in one arm or in one leg.

Cases published by my ingenious friend and former assistant, Dr. J. Hughlings Jackson, have led him to believe that when convulsions take place in cases of the disease of the cerebral convolutions, they appear in the opposite side to that of the disease—a fact which seems to him to show that these convolutions contain motor-centers for the limbs on the opposite side. If we extend our investigation

to a large number of cases of injury or disease of the brain producing unilateral convulsions, we find that they occur more frequently in the limbs on the side where the lesion is in the brain than in the limbs on the opposite side. Thus, of twenty-two cases of hemorrhage in the brain having produced convulsions in only one or in two limbs, there were seventeen in which the convulsions were on the side of the lesion, and five only in which they were on the opposite side. This predominance of convulsions on the side of the brain lesion is a decided proof that these convulsions do not depend on a mechanism similar to that of the movements produced in the limbs on one side in the experiments of Fritsch and Hitzig, as in these vivisections the movements take place in the limbs on the opposite side to that where the brain is galvanized.

The following facts are certainly not in harmony with the view that the convolutions of the brain contain motor-centers. Neither are they in harmony with the view that the pretended motor-centers are in the anterior and middle lobes and not in the posterior. Taking the cases of cerebral hemorrhage collected by Gintrac, I find that there were convulsions in forty-seven out of two hundred and twenty-two cases of hemorrhage in the various parts of the brain proper, not including the corpora striata, the optic thalami, the ventricles, or the central parts. These forty-seven cases of convulsions were distributed as follows:

In	45	cases of hemorrhage in the convolutions,	11	cases.
"	17	" " " anterior lobes,	2	"
"	127	" " " middle " "	25	"
"	33	" " " posterior " "	9	"
<hr/>			<hr/>	
	222		47	

The kind of lesion has much more to do with the appearance of convulsions than the seat of the lesion. The anterior lobes, for instance, give rise to convulsions very frequently in cases of tumor, inflammation, etc., while, as I have already shown, they produce convulsions more rarely than any other part of the brain in cases of hemorrhage (in two only out of seventeen cases of hemorrhage).

I will only mention a few other strong arguments against the view that convulsions in brain-disease depend on an irritation of supposed psycho-motor centers. We find that convulsions may be produced by disease in any part of the brain, and that they may not appear, whatever part be diseased and whatever kind of disease

exists. We find also that convulsions will vary extremely in their intensity, frequency, extent, etc., while the seat and kind of the disease is the same, and that, on the contrary, with a great variety as regards seat and kind of disease, there may be convulsions in the same limited part of the body. If we turn to animals we find, in some of them at least, certain parts the irritation of which gives rise at once to epileptic attacks; but these parts lie in the spinal cord and not in the brain, and the convulsions may take place when the entire brain and pons, and even the medulla oblongata, have been removed.

As time presses, I will content myself, before concluding, with mentioning some very curious experiments I have made recently. Till now I have not been in a position to repeat them as often as I wished, but have performed them already on five guinea-pigs, on one dog, and on one rabbit. They were undertaken with the view of ascertaining whether the application of the actual cautery, at a white heat, to the brain, would produce the crossed movements observed when we galvanize certain parts of the surface of that organ. My son assisted me, and watched the animal while I applied the cautery. In no case was any movement observed under these circumstances, showing that the action of the actual cautery is different in that respect from that of galvanism. But the particularly interesting part of the experiment was that as I continued to observe the animals, during a number of days after the operation, I found, to my great surprise, that they showed some signs of paralysis on the side of the cerebral injury. A paralysis on the side of the brain-lésion in the human subject occurs much less rarely than most medical men believe; thus I have collected more than one hundred and fifty cases in which it has happened. I can not enter into all the theories that have been offered in explanation of its occurrence. With regard to that based upon supposed anomalies in the decussation of the pyramids, I would say that an absence of decussation has never been observed, and that, indeed, the pyramids do not seem to be the channels, at least the only channels, between the will and the muscles, as in the case of Vulpian they were well-nigh destroyed without paralysis resulting.

Another supposition has been made, which probably is true for some cases. Ambrosi, Scholz, and others have looked upon paralysis as being caused by a pressure producing some œdema and anæmia in the other side of the brain, and not by the organic disease we find after death in the side of the brain corresponding

with the side of the paralysis. This certainly is not true for a vast number of cases, in which there was no pressure at all.

The paralysis which has been found in my experiments, above alluded to, following cauterization of the cortex cerebri on the same side, is not, to be sure, very marked, but sufficiently so to be evident to careful observers. It exists in one or both limbs, and sometimes in the belly and the face. It is accompanied by a slight degree of contracture, especially in the front limb. Besides, there is also, on the same side, a paralysis of some branches of the cervical sympathetic nerve, as we find that the eyelids are partly closed and generally the pupil is contracted,—two phenomena which we observe after the division of that nerve.

It is clear that if a paralysis can appear on the side of an injury to, or a disease of the brain, we are not to look upon it as an effect of a loss of function of a supposed motor center.

To conclude, I will say that if we survey all the facts brought forward to support the supposition that there are distinct psychomotor centers in the brain, belonging to each set of muscles performing a distinct kind of movement, we find that it is impossible to admit that these centers occupy a separate, well-defined, and limited territory in some of the convolutions of the anterior and middle lobes of that organ; and we find also that the supposition brought forward in the beginning of this lecture,—that the nerve-cells endowed with each of the primary functions of the brain are disseminated through that organ, so that no local lesion or irritation can reach more than a part of those endowed with the same function or the same kind of activity,—we find, I repeat, that this supposition is supported by most of the known facts and out of harmony with none. Regretting not to have time to dwell more at length on this subject, I thank you for the profound attention with which you have listened to this rather hurried argumentation.

[Dr. Brown-Séquard then demonstrated the changes referred to, especially as regards the eyelids and pupil, upon two rabbits which had recently been operated on in Dr. Bowditch's laboratory at the Harvard Medical College.]—*Boston Med. and Surg. Journal*, July 29, 1875.

Reviews and Notices.

Bad Health: Its Physical and Moral Causes in American Women. By JAMES E. REEVES, M.D., Wheeling, W. Va. Price 50 cents.

A neat pamphlet of 44 pages of good wholesome instruction, containing information of value to every mother and adult daughter in the land.

The Management of Eczema. By L. DUNCAN BULKLEY, A.M., M.D. G. P. Putnam's Sons, publishers. For sale by Robert Clarke & Co.

This is a paper reprinted from the Transactions of the American Medical Association for 1874. Eczema is one of the most common of skin affections; hence a knowledge of its treatment is of special value to every practitioner. Dr. Bulkley looks upon eczema as an inflammation of the skin, analogous to inflammation as presented elsewhere in the human system. Treating the patient constitutionally with cod-liver oil, tonics, and whatever remedies may be indicated to restore the system to a healthy condition, locally the application of the "*liquor picis alkalinus*" is a favorite remedy. The formula for its preparation is \mathcal{R} picis liquidæ, f. $\mathfrak{z}\text{ij}$; potassæ causticæ, $\mathfrak{z}\text{i}$; aquæ distillatæ, f. $\mathfrak{z}\text{v}$; M. Ft. "*liquor picis alkalinus*." S. To be used diluted. The stick potassa to be dissolved in the water, and gradually added to the tar with rubbing in a mortar. Hygienic measures are regarded as absolutely essential. The paper is not long, but eminently practical.

The Present Status of Electricity in Medicine. Being the Semi-annual Address before the Rhode Island Medical Society. By WILLIAM F. HUTCHINSON, A.M., M.D., Providence.

This is a tersely written address, giving a *resumé* of the most approved and recent methods of treating diseases by the use of electricity, and the use of that agent as an aid to diagnosis. The author speaks in glowing terms of the use of electricity in cases of malnutrition, adding to the interest of his subject by a clinical report of a number of interesting cases.

Circular No. 8, War Department, Surgeon-General's Office, Washington, D. C. A report of the hygiene of the United States Army, with descriptions of military posts.

This circular is a ponderous volume of 567 pages. To those who are interested in the construction of hospitals and in a knowledge of the prevalent diseases in all sections of our country, the hygiene of the army, with a complete description of every fort and army hospital in the United States, this circular will be found to be a big bonanza, full of interesting matter.

The preparation of this circular is by John S. Billings, assistant surgeon United States army. A sufficient indorsement of its value.

An Inquiry into the Mortality from Consumption in Life Insurance Companies. With a consideration of its cause, and suggestions for its abatement. A paper read before the Ohio State Medical Society, at its thirtieth annual session, June 15, 1875. By WILLIAM B. DAVIS, M.D.

The author of this paper considers his subject from the standpoint of a man that is individually interested in the success of a life insurance company. Dr. Davis states as a fact that "there are more deaths from consumption among selected (insured) lives than from the population at large;" going on to say that, "After a careful examination of a large number of death returns, and the applications upon which their insurance was based, I am convinced that the deception mainly occurs in the suppression of facts relating to the family of the applicant; and it is accomplished by giving vague or indefinite answers as to the cause of death of parents, brothers, and sisters." Our own opinion about life-insurance examinations is that the insurance companies get just about as good examinations as they are willing to pay for—most companies absolutely refusing to pay the regular family physician of an applicant, for a certificate of family history that would be of real value, which, if it can not be obtained for nothing, they prefer to omit and take the risk, taking instead the statement of some friend of the applicant, the value of which to a life insurance company we have always failed to realize. Men who have a family "taint" and men who belong to short-lived families, are the ones most easily induced to take a policy. Anxious agents, and slipshod examinations, as good as paid for, will account for the increased death rate from consumption among "selected" lives.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. VON ZIEMSEN, Professor of Clinical Medicine in Munich, Bavaria. Vol. III. Chronic Infectious Diseases. By Professor CHRISTIAN BAUMLER, of Erlangen; Professor ARNOLD HELLER, of Kiel, and Professor OTTO BOLLINGER, of Munich. ALBERT H. BUCK, M.D., New York, editor of American edition. New York: William Wood & Co., publishers.

Nearly one-half of this volume is devoted to Professor Baumler's article on syphilis. In recording the history of the disease, he states that "the first knowledge of syphilis, as a separate disease, dates from the end of the fifteenth century, from that notorious and epidemic-like outbreak of the disease in Italy, between the years 1490 and 1500," carefully describing the general features of the disease; in the secondary stage recommending mercurial treatment, and iodide of potassium in the tertiary period. In giving the etiology of the disease, a number of very interesting experiments are recorded to illustrate the contagious nature of the disease, by inoculation with the blood and various secretions of syphilitic persons, also with pus from acne pustules and tonsillar ulcers, all of which proved capable of producing the disease. He says: "With regard to the *infectious nature of pathological secretions*, not properly belonging to syphilis, a definitive conclusion is as yet impossible." On the hereditary transmission of syphilis, he says further: "If a *syphilitic father* impregnates a healthy ovule, and the fetus turns out to be syphilitic without doubt, the mother becoming similarly affected, it is without doubt the semen that served as the vehicle of the syphilitic poison. Again, the ovule may be developed in the ovary of a *syphilitic woman*, and having received the germs of disease from the mother-soil that produced it, the fetus will be syphilitic, though the ovule was impregnated by healthy semen. Finally, there is a third case, where the *mother* acquires syphilis *during the time of gestation*, and infects the developing fetus through her blood." And as to whether syphilis is transmissible into the third generation is regarded still as an open question. The author, after relating a number of cases, comes to this important conclusion: "1. That syphilis can be transmitted by vaccination. 2. That the course of the vaccine pustules in children already syphilitic at the time of vaccination, may be perfectly normal and leave scars of the usual appearance. 3. That in cases vaccinated from such children, unless the inoculation fails altogether, either the vaccine may take alone, or the syphilis alone, or both may take together and go on to their full development." Such statements enunciated

by such high authority, can not but command attention, and should cause practitioners to be doubly careful in regard to the vaccine virus they use, giving preference where there is the least shadow of doubt to matter direct from the cow.

In regard to the doctrines of unity and duality of chaneroid and syphilis, he concludes as follows: "Weighing together all the facts thus far collected, with reference to the question at issue, we can not but regard *the chancre as a purely local, contagious affection*, and that while it may stand in some remote relation to syphilis, it does not do so necessarily"—asserting that "*the chancre (soft chancre) is a contagious local affection, and is not followed by constitutional syphilis*"

As to the prognosis, the following assertion is made: "We now know with certainty that a patient may entirely recover from syphilis, and that, too, in a comparatively short time." We think this will be questioned by many eminent syphilographers.

The next article, on the infection by animal poisons and diseases of animals, by Professor Bollinger, embraces such diseases as glanders, malignant pustule, and hydrophobia. Of glanders, the author says: "In horses, it is a specific infectious disease, the spontaneous origin of which has not been demonstrated." It is a disease that is communicable to man and the entire class of domestic animals, with the exception of cattle. The wood-cuts illustrating the pathological conditions found in the nose, head, bronchus, and lungs of horses that have died of the disease are very fine; also of the nodules and ulcers found on the skin, which are peculiarly characteristic of the disease.

The article on anthrax, by Professor Bollinger, is very complete and satisfactory. In giving the history of the disease, he says that, "Among all the contagious maladies affecting animals, anthrax has been the longest known, since in the earliest records of all historical knowledge (Exodus ix.), we possess descriptions of devastating diseases of animals, which, in all probability, relate to maladies of the same type as anthrax."

As to the etiology of the disease, he says: "Anthrax is an acute infectious malady, which breaks out commonly in an epizootic manner, and is not unfrequently sporadic in herbiferous animals and swine. It is transmissible to a great number of other animals, as well as to mankind." . . . "Local peculiarities of soil play an active part in the development of enzootic anthrax. An unusual amount of *decaying vegetable matter* in the soil, conjoined with an excess of

moisture, appears to furnish the most favorable conditions of life for the poison," though he regards the chief source of the disease as contagion. The bacteria found in the blood of animals diseased with anthrax are illustrated with wood-cuts.

"Anthrax in man is most frequently found where the disease rages as an enzootic among the domestic animals, and it is peculiarly apt to attack those who have to do with diseased animals, living, as well as dead, and those who work in industrial establishments where the products of diseased animals are manufactured (especially hides, horse-hair, and wool), though in many cases it is absolutely impossible to establish the source of the infection." As characteristics of the disease in man, the author notes the suddenness of the invasion, the rapid course, and the stormy outbreak of the phenomena, among which are to be especially noted vomiting, diarrhea, cyanosis, and rapidly following collapse.

Hydrophobia in animals is also by Professor Bollinger. This disease prevails chiefly among animals of the canine species, often as an epizootic. It is an acute infectious disease, "coming on in the form of a functional disturbance of the central nervous system, with an absence of all gross anatomical changes, and distinguished from other similar diseases by its long and extremely variable period of incubation." The virus is always fixed and never volatile. The anatomical lesions are summed up as follows: "A dark, thick, and tar-like condition of the blood; œdema of the brain; more or less pronounced catarrhal alterations of the mucous membranes, especially of the respiratory and digestive canals, conjoined often with hyperæmia and ecchymosis; hyperæmia and cyanotic discoloration of the parenchymatous organs; an absence of the usual contents of the stomach and intestine, and the presence therein of indigestible foreign substances; and, finally, the striking emaciation of the entire animal."

The symptoms and course of the disease are vividly portrayed. The method of treatment in man should be: "The removal of every cause of excitement; the separation of the patient from everything calculated to disturb or render him anxious; the maintenance of the utmost quiet; the employment of a friendly tone of address, (in the place of coercive measures); and the endeavor to calm the sufferer by kind treatment. In order to maintain the strength nutritious enemata, the introduction of the œsophageal tube during the narcosis produced by chloral or chloroform, and the administration of food by its aid, are indicated. To this may be added the subcutaneous injection of curare and morphia."

The articles by Professor Heller, on diseases from migratory parasites, are all that could be desired, embracing, as they do, the literature of the subject down to the most recent discoveries, being most profusely and artistically illustrated.

Consolidation of Medical Journals.—The *Chicago Medical Examiner*, heretofore published by N. S. Davis, M.D., has been consolidated with the *Chicago Medical Journal*, heretofore edited by J. Adams Allen, M.D., and Walter Hay, M.D. These two periodicals will hereafter appear as the *Chicago Medical Journal and Examiner*, at four dollars a year in advance. W. B. Keen, Cooke & Co., publishers, 113 and 115 State street, Chicago.

Biographical and Critical Miscellanies. By WILLIAM H. PRESCOTT. New edition. Philadelphia: J. B. LIPPINCOTT & Co. For sale by Robert Clarke & Co. Price \$2.25.

This volume completes the new edition of Mr. Prescott's works. The essays composing the volume were selected from contributions originally made to the *North American Review*, and embrace articles on Scottish song, Italian narrative poetry, poetry and romance of the Italians, Chateaubriand's English literature, and short biographies of Cervantes, Sir Walter Scott, and Charles Brockden Brown, the American novelist. With such an announcement of contents, the reader of Prescott's works can not but anticipate a real literary treat. When we say those anticipations will be more than realized by the reader, we are scarcely doing justice to the real merits of the work. This volume contains a beautiful steel-plate engraving of the author.

Medical Addresses. By BENJAMIN EDDY COTTING, A.M., M.D.

This pamphlet of 123 pages consists of three addresses delivered by Dr. Cotting before the Massachusetts Medical Society, and the Norfolk District of the Massachusetts Medical Society—the first, on "Nature in disease;" the second, "Disease a part of the plan of creation;" third, "My first question, as a medical student, viz: 'What will be the course and result of the disease, if left to itself without medicine?'"

The Series of Clinical Lectures, edited by E. C. Seguin, M.D., and published by G. P. Putnam's Sons, are all that could be desired in that direction. Vol. I., No. 4, "Rest in the Treatment of Nervous Disease," by S. Weir Mitchell, M.D., and Vol. I., No. 7, on "Capillary Bronchitis of Adults," by Calvin Ellis, M.D., present the views of these able investigators on the subjects indicated.

THE CINCINNATI

LANCET AND OBSERVER.

J. C. CULBERTSON, M.D., Editor.

VOL. XVIII.—OCTOBER, 1875—No. 10.

Original Communications.

Art. 1.—Lecture upon Granulations of the Conjunctiva.

By Dr. SICHEL, Son, Paris. From the "Archivès Générales de Médecine."

Translated by Miss A. V. Culbertson, Zanesville, Ohio.

SYNONYMY.—Conjunctival granulations; granulations of the palpebræ; Egyptian ophthalmia; military ophthalmia; ophthalmia of armies; hypertrophy of the papillæ; trachoma; aspritudo.

Upon glancing over the numerous synonyms which we have enumerated, it would seem that great confusion exists in relation to this subject. This disorder in truth does exist, even in our day and throughout our country, under the name of granulation of the conjunctiva; whereas, granulations of the conjunctiva are separable into two distinct forms.

Another source of this difficulty is that the malady has been thought by some to be endemic to certain countries or premises; but this supposition, is fictitious and results from a false interpretation and imperfect hygienic measures.

In giving an account of the first of these causes of error, it will be sufficient to glance over the recent works relative to this subject.

We notice at once that those who have attempted a description of this ophthalmia are much mistaken in grouping under one name two affections absolutely distinct. Thus, Professor Gosselin gives the following definition of conjunctival granulation:

"In France," says he, *"we thus denominate the numerous red protuberances of a round form which appear upon the surface of the palpebral conjunctiva, in quite a number of cases of chronic blepharitis; and we recognize that of these, some are consecutive to suppuration of the conjunctiva, while others appear after non-purulent blepharitis."*

Still more recently, M. Hairion, professor in the University of Louvain, while seeking to avoid this confusion fell into new trouble in the nosology of granular ophthalmia by describing as neoplasms, transformations that take place in one of the states that have hitherto been described under the collective name of granulations of the conjunctiva.

This point once established, even from a simple cursory view, we should observe, first, that there exists in what has been described under the name of granulations of the conjunctiva two states absolutely different, and that the confusion has been caused by the great analogy between the determinative causes of both states, by a certain similarity in their symptoms and the secondary derangements which they occasion, as well as from the fact that the name "granulation" has been applied to both.

This confusion moreover arises because histological acquaintance with the normal and pathological structure of the conjunctiva has remained even to this late day inaccurate; in fact, under the name of granulations have been included:

1. Exaggerated development of the papillæ of the conjunctiva.
2. Engorgement of the lymphoid cellules contained in the fundamental reticulated conjunctival tissue, or the adeniform tissue of this membrane.

It will be seen by this short preamble that our intention is to describe separately:

1. Exaggerated development of the papillæ, papillary hypertrophy (papillary trachoma, Stellwag de Carion), or rather hypertrophic engorgement of the papillæ, as we propose to call it.
2. Granulations properly so called, acute granulations, vesicular granulations (Hairion), trachoma (properly so styled by the Germans), or engorgement of the lymphoid cellules.

HYPERTROPHIC ENGORGEMENT OF THE PAPILLÆ.—*Objective symptoms.*—If we examine the internal surface of the palpebræ, we shall

find the entire surface of the conjunctiva occupied by a mass of little elevations presenting more or less a cuboid or pyramidal form. The bases of these elevations are merged into the neighboring conjunctiva, and the free portions are more or less round. They present four faces, flattened by the pressure of one against the other; they all have a form analogous to that of the "pains de mie," which we see in bakers' windows. Their color is a bright red, varying sometimes to carmine or purple. They are accompanied by a thick, viscous, conjunctival secretion, more or less abundant, which accumulates toward the great angle of the eye and at the base of the lashes. The palpebral cleft is narrowed; the superior palpebra droops in consequence of its increased volume and weight, so that the levator muscle can only elevate it imperfectly. We observe, at the same time, that the inferior palpebra presents a marked tendency to ectropium. From these last three symptoms results a peculiar expression of countenance which often enables one to make a diagnosis at a distance. It is not always thus, however. An observer, even though attentive and experienced, may not be able to discover anything about the exterior to awaken his suspicions, and will be much surprised upon turning back the lids to find hypertrophied papillæ. If we turn back the lids, we observe that these little elevations do not begin at the edges of the lids, but at a certain distance from them, varying from one to two millimetres. The most numerous lie toward the angles of the eye, and in the direction of the posterior edge of the tarsus, beyond which they are prolonged upon the cul-de-sac. At these two points of the palpebral conjunctiva each elevation is pressed against the other, so that one can no longer distinguish the surface of the conjunctiva upon which they are elevated. Their favorite seat is the superior lid. Toward the angles, where their development, far from being impeded by pressure against the globe, is on the contrary facilitated by the free space which exists between the globe, the orbital wall, and the tarsal cartilage, these elevations obtain their greatest height, and this may vary from one to two millimetres. The lowest are seated at the region corresponding to the middle portion of the tarsus. These little tumors, as one might call them, are accompanied by considerable augmentation in the dimensions of the conjunctiva itself. There may also often be observed back of the tarsus in the conjunctival cul-de-sac one or two large folds of the mucous membrane, under which, frequently, the adipose tissue will be seen to be more abundant than in the normal state. In a marked case these

folds of the cul-de-sac are themselves covered with a large number of such elevations.

All these tumors are inclined one toward the other from the external toward the internal angle, and this explains the course of the mucus secreted toward the latter, and its accumulation at this point. They present absolutely the same anatomical disposition as the papillæ of the conjunctiva in its normal state.

These hypertrophied papillæ often present an aspect analogous to that of proud flesh. Often, also, they have a fungous appearance and consistency, which causes them to bleed at the least touch; at other times, instead of being pressed against each other in several rows, they are isolated or arranged in a single row—an arrangement which procured for them from my late father, the name of discreet granulations in the first case, and cock's-comb granulations in the second. Figures three and four, plate second, of my father's "Iconographie," give *strikingly* exact representations of these.

The conjunctiva itself, at the points which are not invaded by pathological productions, shows a free injection as well of the conjunctival vessels proper as of the sub-conjunctival vessels. This injection reaches to the bulbous conjunctiva, and extends occasionally to the edge of the cornea. When the malady has existed for a certain length of time, we observe a roughened aspect of the cornea. A little later, there succeeds to the roughness of the cornea a vascularity more or less marked by roughness. This vascularity, situated in the deeper part of the second layer, or Bowman's membrane, may be so confluent as to render the cornea nearly opaque. This state of the cornea, in many cases, is limited to the superior half or two-thirds. In some cases, however—and these are the most numerous—it extends through all the membrane, but there exists free spaces between the vessels, which allow the intermediate parts to be seen. This is what is ordinarily designated *pannus tenuis*.

The height of these pathological productions may vary from three-tenths of a millimetre to two or three millimetres. Sometimes isolated, but nearly always pressed against each other, we observe some of them grow larger and larger, encroaching upon their neighbors. These drain most easily, and show a consistency essentially fungous and friable.

The red, bristling aspect presented by these elevations, caused the ancients to give them the names of "*traxomata*" (Hippocrates) and "*aspritudinis*" (Galien), and has gained for them the name of

papillary trachoma, under which they are described by Stellwag de Carion. This denomination, perhaps, merits preservation.

Subjective symptoms.—The patients complain, on awakening, of the lids being glued together, and of a photophobia more or less intense, and are especially tormented by a sensation as of the rolling of a foreign body between the lids and the globe of the eye. When the malady is of long standing, and when the cornea presents the roughened aspect of which we have spoken, there results an affection of the sight much complained of at times, and which may even go so far as to render the patient incapable of locomotion.

ENGORGEMENT OF THE LYMPHOID CELLULES.—*Objective symptoms.*—That which first attracts the attention of the observer, is a peculiar expression and appearance of the patients. The upper eyelid droops, and is thickened and swelled. The lashes, instead of being directed toward the front and slightly upward, point downward and slightly backward. The external commissure is more or less concealed by a vertical cutaneous fold, whose presence is exaggerated whenever we attempt to separate the lids. Lastly, one is impressed with the generally miserable expression of countenance. These symptoms, which sometimes enable a diagnosis to be made without close examination, are not, however, always to be depended on, and in certain cases nothing in the external appearance indicates the presence of the disease.

On reversing the upper lid and examining the surface of the palpebral conjunctiva, we observe a variable number of smooth, round white spots projecting but little above the tarsal membrane. These are generally injected and slightly infiltrated. The most numerous are found toward the internal angle of the upper lid, where they are united in little groups. Again, we find them accumulated toward the middle of the tarsus, especially when we examine them upon the first appearance of the malady. Others are ranged along the posterior edge of the cartilage, especially toward the cul-de-sac, or upon the tarsus itself. Under such diverse forms these productions resemble somewhat the lesions we find upon the small intestines in dothineritis. No sanguineous vessels pass in front of them; sometimes a vessel, on reaching them, may divide and pass around their circumference. Gradually these spots increase in volume and extent, becoming more prominent upon the surface of the mucous membrane, and presenting a darker hue—a grayish rose-color.

Soon their dimensions become greater; their color grows paler

and varies to a yellow tint, and they now resemble *the spawn of frogs or grains of cooked tapioca*. They have a glutinous appearance, and from this moment the granulations are formed, or, if we prefer, they have reached their highest state, and constitute what are called vesicular granulations. (Hairion.)

After a variable period, the color is again modified. It becomes a more decided yellow, and the little tumor is transformed into a caseous mass resembling softened tubercle; in fact, this kind of vesicle often becomes softened and discharges its contents. At the spot where it was situated, we soon after observe a cicatrice in the tissue of the conjunctiva. As in the preceding state, the cornea is not long in being invaded by a more or less confluent vascularity, which has its origin in the superior cul-de-sac and the neighboring bulbous conjunctiva, and descends on the superior half of the cornea, where it forms an abundant, thick, and fleshy film. This state has received the name of *pannus crassus*.

We observe, in addition, that in the midst of this film of new formation, as well as in the neighboring conjunctiva, and even near the cul de-sac, are scattered among the vessels a number of the pathological productions which we are now considering, and which sometimes are of a more advanced age than those we meet with upon the palpebral conjunctiva. Again, at the same time with the tumor just described, we notice the preceding form develop, and then observe upon the conjunctiva the two different species of granulations we have thus far described—viz., true granulation and papillary hypertrophy—forming thus what has been described as mixed trachoma. (Stellwag de Carion.)

In still other cases we can not observe any form of protuberance. The conjunctiva presents a swollen infiltrated appearance, and a grayish or yellowish-red color, with little or no embossments. The general aspect of the mucous membrane is gelatinous; the rare elevations met with, may be traced to one or the other of our two types of granulation, and the microscope itself affords but slight information by reason of the general inflation of the mucous membrane. This state has been described under the name of diffuse trachoma. (Stellwag de Carion.)

Whatever may be the aspect of the mucous membrane, we may state with certainty that there is always a more or less pronounced secretion, analogous to that which occurs during the declining period of catarrhal ophthalmia. The secretion is especially abundant when the rupture of these little vesicles and the escape of their

contents occurs. To this discharge is added a more or less abundant flow of tears.

Subjective symptoms.—Nearly the same as in the first form. They are characterized, however, in the larger number of cases, by a greater tenacity, and are often accompanied by general constitutional morbid phenomena. Visual symptoms are also more pronounced, and photophobia more intense. The sensation of a foreign body rolling about under the lids is very marked, and leads the patient to rub the eyes continually, notwithstanding the formal prohibition of the surgeon.

In some cases, on the contrary, we are surprised at the slight objective symptoms complained of by the patients. They scarcely mention any defect of their eyes—a fact of which we have already spoken; in short, we realize, in considering the complications, that they are far more frequent, much more intense, and more formidable in this than in the preceding form.

PATHOLOGICAL ANATOMY.—*a. Engorgement of the papillæ.*—Upon the surface of the elevations which we have described in the first variety, we can not detect with the naked eye any vascular networks which will account for the intensity of their color; but, if we excise one or more, and examine them under the microscope, it is easily seen that they include all the curved and spiral vessels corresponding to the vascular arrangement in the normal papillæ of the conjunctiva. But here there is dilatation of the vessels and sanguineous engorgement of the papillæ themselves, which is abundantly proved by the relatively enormous amount of blood which flows from the point of excision.

When the tumors have reached their greatest development, we can no longer observe in the intervals which separate them from each other, the normal vascular plexis of the conjunctiva more deeply seated than they; in fact, these conjunctival vessels ramify through a layer of tissue situated beneath the papillary bodies. The microscope reveals upon each tumor a more or less thick epithelial layer. This epithelium, at the surface, is of the tessellated form, and at the point of contact of the epithelium and papillæ, is transformed into the cylindrical variety, inclosing oval nuclei in the midst of the granular contents of the cell.

Gradually, and in proportion as we approach nearer the interior of the papilla, this epithelial layer disappears. Below the papilla we find a granular amorphous mass, in which are disposed the several fibres and cells proper of the conjunctiva. Numerous fibro-

plastic cellules and a large number of free nuclei encounter each other in the mass, and we may observe a number of nuclei in course of segmentation, and giving rise to the formation of new cells. In the midst of all these elements, numerous vessels form a close network around the base of the papilla.

This exaggerated development of nuclei, their segmentation, the numerous cells of new formation, show clearly that this pathological state is one of proliferation, or, if we prefer, veritable hyperplasia of the cellular tissues.

The general swelling of the conjunctiva is dependent upon a serous infiltration of that membrane, occasioned by vascular engorgement following the arrest of blood, and also, in part, upon the increase in number and volume of the elements of the mucous membrane.

As we approach the cul-de-sac, the different alterations tend to diminution, and in this region we encounter only great injection, not only of the conjunctival vessels, but also those of the subjacent layer.

b. Engorgement of the lymphoid cellules.—As we have seen, the conjunctiva, in its normal state, includes in its reticulated connective tissue, cellules resembling lymphatic follicles, which are there distributed in considerable number. (Henle.)

If the lymphoid cellules have just become engorged, and the contents be in proliferation at certain points, these small structures become spherical and hypertrophied. This was discovered by the late De Graefe, and described by him, for the first time, in one of his clinical lectures in 1864. (P. Blumberg.)

On the other hand, we must observe that all the authors who have given a micrographical description of these bodies, indicate that their contents are composed of cellular corpuscles, whose characteristics are those of lymph corpuscles (globules), more or less altered by the reagents to which they have been subjected. (See, among others, Hairion, *Annales d'Occulistique*, t. lxiii., 1872.)

In order to show in a more decided manner that these productions are not neoplasms, it will be sufficient to remark that upon the death of the patient affected with them, all these so-called neoplasms disappear as if by enchantment. These bodies not being neoplasms, and the word "granulations," as we have seen, inducing a most troublesome confusion, it seems proper to us, in considering what we have just written, to replace these two terms by "engorgement of the lymphoid cellules."

In an anatomico-pathological view, it is possible to distinguish in the evolution of the disease of which we treat, four periods or states. If most authors have described only three, this is due, possibly, on the one hand, to the pioneers among them, as we have seen this state described in anatomy by distinguished anatomists as a normal condition of the conjunctiva as "trachomatous glands," or closed follicles of this membrane; or, on the other hand, by the fact that in the evolution of this first stage, the patients feel little or no inconvenience, and so it quite frequently escapes the observation of the physician, who discovers the granulations accidentally while examining the conjunctiva in order to arrive at a diagnosis of another disease, with which the patient is simultaneously affected.

First period or stage.—Upon examining the internal surface of the lids, we notice upon the surface of the more or less injected conjunctiva, small, round, glossy white spots, not elevated above the surface of the mucous membrane, and surrounded at their circumferences by slight vascular networks, which stand up more or less clearly from the neighboring parts of the conjunctiva. If we pick them with the point of a fine needle, they discharge a small quantity of liquid of a whitish color, which, examined under the microscope, shows numerous round hyaline corpuscles, identical with the colorless corpuscles of the blood, or with those of the lymph (globules), and consequently with those of pus.

M. Hairion has distinctly observed the presence of these round cellules, and assigns to them a size two or three times those of pus. Their enlargement is doubtless due to the fact that he examined them after the addition of water, which addition occasioned imbibition and distension. After a variable time, these little spots become more conspicuous, and present a grayish-red color. I style this the period of invasion, or "acute period." It corresponds to the acute granulations of other writers.

Second period or stage.—The conjunctiva presents a more marked injection, accompanied by slight effusion, especially at the circumference of the trachomatous areas. These little spots increase in volume; they extend noticeably above the level of the conjunctiva; they present a decidedly grayish color, a gelatinous aspect, and resemble grains of cooked tapioca, or the spawn of frogs. If, as in the preceding stage, we examine the contents, we find it to be of a gluey, viscous consistency, and the microscope reveals the proliferation and segmentation of the globules. Veritable trach-

oma exists from this state, and constitutes what our Belgian confreres have named vesicular granulations. I denominate this the period of acme.

Third period or stage.—The trachomatous point loses its gelatinous aspect; it becomes yellow or whitish-yellow in color; its dimensions are either slightly greater or slightly less. The conjunctiva is more injected, its engorgement has increased, its surface has become slightly reddish, and at times engorged papillæ show themselves in the parts situated between the papillæ, thus giving rise to what has been called mixed granulations. (Stellwag de Carion.)

On examining the contents of the so-called vesicles, we observe a caseous mass of a yellow color, identical with softened tubercle, and which, under the microscope, appears like an amorphous mass, inclosing here and there colorless globules, numerous detached nucleii, and, above all, adipose vesicles.

We see, then, that the mass contained in the engorged cellules has undergone fatty regression. During this stage the mucous secretion is most abundant. This might bear the name of the "period of decline." It corresponds to the "chronic granulations" of certain writers.

Fourth period or stage.—The vesicles break, allowing their contents to escape, which are eliminated with the tears, and the secretion having partly dried up, becomes more consistent. The general red tint of the conjunctiva diminishes, and its infiltration becomes less. In the place of vesicles we observe small blank spaces formed by the cicatrices, to which succeed atrophy and retraction of the conjunctival tissue. This constitutes, according to myself, the period of termination, which hitherto has been very slightly or indifferently described.

It should be added that, in certain cases, this engorgement of the lymphoid cellules of the palpebral conjunctiva, may extend to those of the ocular conjunctiva, to the semi-lunar fold, to the caruncle, and, in complicated long-continued cases, to the cornea itself; whence the presence, according to some authors, of veritable trachoma or vesicular granulation at these different points. These cases are always extremely rare, and the malady must have existed for a long time before we can observe the engorgement of the lymphoid follicles of these regions. We observe, however, that all authors agree in considering that the presence of granulations upon the cornea, is seen only in the oldest chronic cases of granulation.

The favorite seat of the disease, in order of frequency, is the in-

ternal angle of the upper lid; the internal angle of the lower lid; the external angle of the upper and lower lids; the neighboring points of the posterior edge of the tarsus, especially of the upper lid; the culs-de-sac, especially the superior; the semi-lunar fold; the caruncle; the upper part of the ocular conjunctiva; finally, the upper half of the cornea. As to their histological location, it is sufficiently indicated by the denomination "engorgement of the lymphoid cellules."

We can not terminate the pathological anatomy of this disease without adding several words as to the so-called "diffuse granulation"—a variety which, properly speaking, constitutes but one state, which, happily however, is observed in only a very small number of subjects.

In this the conjunctiva develops a general grayish-red tint, a lardaceous appearance, a manifest yet faintly pronounced infiltration, accompanied by variable thickening; the vessels are hidden at some points, and at these the gray color is especially noticeable.

The surface of the conjunctiva in general is reddish, rough (*traxus*), especially toward the internal angle and the posterior edge of the tarsus, although it may be modified throughout its entire extent. The lids show a marked tendency to entropion in the upper, and ectropion in the lower; the mucous secretion is thick and viscous. If, in the parts of the conjunctiva where the color is especially gray, we make a series of scarifications, the tissue sounds under the instrument, and from a number of incisions we observe a limited discharge of a non-transparent liquid, more or less yellow, that escapes from the lymphoid cellules, which are not visible in the conjunctiva when examined by the naked eye.

However, with the lens and oblique illumination, we can perceive those cellules of the conjunctiva whose engorgement is most pronounced, and the practiced observer may venture upon the puncture and evacuation of each of them one by one, as it were. In this form, by reason of the want of prominent vessels upon the surface of the conjunctiva, it is difficult to determine the different *periods* of the engorgement which exists, however manifest, while attentively following the course of the disease. But, we repeat, this form is, happily, rare, and merits only a simple mention.

COMPLICATIONS.—The complications which may supervene in the disease of which we are treating vary according as they relate to one or the other form. In papillary engorgement the complica-

tions most to be feared are vascularity, opacity, and softening of the cornea. Vascularity is due to the rubbing of the engorged papillæ upon the surface of the cornea, and in this the upper lid is the principal agent. We also observe, in the majority of cases, when the disease has existed a certain time, that the superior half of the cornea presents a markedly polished appearance; shortly this is replaced by thickening of the epithelium, which then becomes the seat of a proliferation analogous to that which takes place in induration of the epidermis.

Soon after, we notice that the corneal border is invaded by confluent injection, resulting in the development of numerous newly formed vessels, which pass over from the conjunctiva to the cornea, proceeding toward its centre, and ending in what my father called the *panniform* state, and which other writers designate as "*pannus tenuis*."

In the beginning, there are only a few vessels in direct connection with those of the conjunctiva, and which, having reached the cornea, proceed in a radiating manner toward its center. There they fold upon and inosculate in arcades with each other. If this state exists long, and treatment is badly conducted, these vessels become more and more numerous and more confluent, inosculating in arcades with each other in their course, and constituting at first a delicate, compact network. The meshes of this network become finer and finer; the vascular stratum continues to thicken, and there soon results a true fleshy thalamus, which has received the name of vascular or fleshy pannus—the "*pannus crassus*" of writers. At the same time, the layers immediately beneath the cornea become infiltrated, and there occurs in addition hypergenesis of the cells proper of the cornea.

If this state continues, this perturbed proliferation of the cellular elements of the cornea closes with segmentation of the cellules, whence results soon, softening of the cornea, change of its curvature, and sometimes its perforation. We have neither the time nor the space to enter into more ample details of the different changes that we have just mentioned. We must restrict ourselves to remarking that, after these different phases of the complications in the state of the cornea, vision always remains sensibly altered, except when the complication has continued restricted to a slight thickening of the epithelium or to a sparse development of vessels.

These two alterations, when the treatment has been instituted in time, disappear rapidly with the cause which has produced them.

If, on the contrary, the disease has existed for a long time, or if the treatment has been badly conducted, interrupted, or too soon suspended, there remains nearly always a more or less marked affection of the cornea, modification of its surface, or changes in its curvature. .

If the patient is troubled with engorgement of the lymphoid cellules, then, to the complications of mechanical origin, which we have just mentioned, may be added two of a still graver character: To the vascular pannus must be added that which has been called granular or trachomatous pannus, produced by the development, on the ocular conjunctiva in the neighborhood of, and sometimes on the cornea itself, of so-called vesicular granulations, which are only the extension of the engorgement of the lymphoid cellules of the palpebral conjunctiva to those of the ocular conjunctiva.

At this stage, the lymphatic network of the conjunctiva spreads toward Bowman's membrane, which shows a pathological thickening, and the engorgement of these same lymphoid cellules soon supervenes as in the conjunctiva.

The truth of this assertion is easily shown by the fact that in the case of granular or trachomatous pannus, we often meet with vesicular granulations on the mucous membrane of the culs-de-sac. It will be readily understood that this alteration of the cornea must involve as a sequel other serious injuries to the corneal tissue besides simple vascular pannus. The modifications of the lymphoid cellules extending over the cornea—the different stages, previously described, of the evolution of the disease—must terminate in destruction, atrophy, and retraction of the tissue of the cornea; whence the numerous facets, the deep and ineradicable scars, sometimes even the leucoma which granular pannus always brings in its course, and which constitute the greatest danger in this troublesome complication.

Let us add to this the tenacity, I might almost say the rebelliousness of this complication against ordinary treatment, and the necessity of the surgeon's employing the strongest measures—as inoculation with blennorrhagic muco-pus and conjunctival incisions—and we can easily understand the apprehension with which "pannus crassus" inspires all experienced physicians.

Another complication, not less troublesome than engorgement of the lymphoid cellules, is that which supervenes after the extinction of the pathological processes. To the solution of continuity of the mucous membrane, in the points where vesicular granula-

tions have existed, succeeds cicatrization, followed by atrophy of the tissue of the mucous membrane and its secretory elements. This atrophy involves inevitably the contraction of the conjunctiva *en masse*, which causes retraction and diminution in the dimension of the lids by inversion of their free edges and of the tarsal cartilage. From this results narrowing of the palpebral cleft, blepharophimosis, and a veritable entropion, which increases the pressure of the lids against the globe, and especially upon the cornea, and keeps up in the latter a state of chronic vascularity, over which no medical means can triumph.

This blepharophimosis and entropion is the case of the angular erosions so frequently observed with granules, and which disappear only with the efficient cause. But, notwithstanding their gravity, nothing is easier than to put an end to these complications by the aid of a simple operation, which we shall describe in detail when considering the treatment.

The complications which we have just described, are followed in the most fortunate cases with sequelæ of three different orders:

1. Opacities, which induce in their course amblyopia, the more pronounced according as they are situated nearer the center of the cornea opposite the pupil, and later, they may render necessary the operation for artificial pupil. (See further on.)
2. Changes of curvature, which may induce myopia, or irregular astigmatism, which renders necessary the employment of proper means for remedying these two defects of refraction; and we have not in this case great therapeutical resources at our command, for the myopia is caused by the affection of the cornea, and the astigmatism, resulting from irregular changes of curvature, is but slightly susceptible of correction.
3. Finally, the facets of the cornea cause monocular polyopia—an affection the more troublesome, because, up to the present, we have at our command only very inefficient means for overcoming it.

Progress.—The disease which we are considering, presents, as we have been able to trace it, a different degree of gravity, according as we have presented one or the other form of the malady. The first, although serious, is certainly infinitely less grave than the second, especially in regard to the lesions which follow. Both forms may disappear spontaneously, but never without leaving indelible traces of their presence. Properly treated, and above all taken in the beginning, they often heal without the patient's discovering that they have been attacked by the disease.

As to the division of the course of the second form into acute and chronic, we content ourselves with remarking that it is, if not based upon a false interpretation, at least more artificial than real, and answers no practical purpose.

The disease may terminate before the evolution of the four periods, especially after the first, and sometimes after the second. This happy ending has been described as an acute progress. When the disease passes from the second period into the third, the progress is said to be chronic. We do not in any manner accept this view, and we believe that the disease in these two cases is always the same. Its progress has uniformly an essentially chronic character; its termination at the close of the second period can only be regarded as altogether exceptional.

Duration.—Variable, always as long for one as for the other, but especially for the second form. It is rare to see either form of the disease terminate under two or three months, and we have observed numerous examples where the disease had persisted for one, or even for several years.

This last is especially true of diffuse granulations.

Termination.—Papillary engorgement terminates generally by returning to the normal state, except in some, happily, rare cases where serious complications exist. We fear, most unquestionably, that which succeeds the too prompt evolution of the disease, and the too rapid disappearance of the hypertrophied papillæ. There then supervenes a sort of cicatrization *en masse* of the conjunctiva throughout its thickness.

Engorgement of the lymphoid cellules, except in rare exceptions, where the disease ceases before the complete evolution of all the periods, always terminates by the formation of bands and cicatrices in the conjunctiva, and often even in complete atrophy, which may pass into xeroma.

The most fortunate termination is where engorgement of the lymphoid cellules immediately succeeds engorgement of the papillæ, thus constituting "mixed granulations." The development of the latter generally causes the disappearance of the former.

Lastly, the most troublesome termination is that which succeeds diffuse granulation, and which is almost always atrophy of the mass of the conjunctiva.

Causes.—All the influences which can cause violent irritation of the papillæ of the conjunctiva, may also induce their engorgement; but without doubt the most frequent cause is inoculation with

mucus or muco-pus developed from one of the three affections heretofore described—catarrhal, purulent, and diphtheric conjunctivitis, but especially the first two.

We see from this that it is only to our first form that the definition of M. Gosselin, cited above, can be applied.

On the other hand, papillary engorgement always being accompanied by a certain degree of irritation of the entire mucous membrane, and by a more or less abundant mucous secretion, it is beyond doubt that inoculation with mucus derived from a conjunctiva attacked by engorgement of the papillæ, may induce the development of the same disease in a hitherto sound eye. But in order for this to occur, it is necessary that the soil should be prepared, and that there be in consequence a predisposition to the affection. Again, it frequently happens that the communicated disease confines itself to a special conjunctivitis essentially mild and tending manifestly to spontaneous recovery; hence, de Graefe has described it under the name of abortive blennorrhœa.

This mild form of conjunctivitis is certainly known to all ophthalmologists, and yet nowhere among them do we find a mention of it. It is characterized by a deep red color, almost of the hue of wine-dregs, of the palpebral conjunctiva and of that of the cul-de-sac. This color is accompanied by a very marked degree of hyperæmia of the bulbous conjunctiva in the neighborhood of the cul-de-sac, but it ceases abruptly at two or three millimètres distance from these.

At the point where injection ends on the ocular conjunctiva, we observe a reddish-yellow orange tint on the sub-conjunctival tissue, with slight œdema. The rest of the ocular conjunctiva is normal.

At the same time, in the inferior cul-de-sac and toward the internal angle of the eye, we notice the presence of a certain amount of very thick, coherent mucus of a deep yellow color.

This conjunctivitis is almost always produced by direct inoculation; though it heals spontaneously, its termination can be sensibly hastened by the employment of chlorinated water.

Lastly, there may result from this contagion simple traumatic conjunctivitis, as we have already remarked in regard to the different forms of conjunctivitis reputed to be contagious. Engorgement of the lymphoid cellules may be induced by all the causes which tend to diminish the resistance of the tissues in general, and consequently that of the conjunctiva.

Poor nourishment, bad hygiene, squalidness, crowded dwellings, exposure to miasmatic exhalations, dampness, poverty, famine, war—from all these causes arises the much greater frequency of this disease in the inferior than in the more elevated classes of society; whence, also, its development in those establishments where all or several of the above causes are united—such as barracks, poor-houses, orphan asylums, hospitals, prisons, schools, dormitories or apartments in which a great many people are crowded together under unfavorable hygienic conditions.

Let us also observe that to this same concurrence of circumstances should be attributed the endemic form in which this disease prevails among certain classes of the population of different countries—Egypt, Algeria, Spain, Franco-Belgian frontiers. As to the transmission of the disease by direct contagion or inoculation, we believe this to be an absolutely false doctrine, arising from an erroneous interpretation of observed facts. As we have seen, vesicular granulation is always accompanied by a certain degree of catarrh, whose presence is revealed by a more or less abundant mucous secretion.

Conveyed to a healthy eye, this secretion may determine one of two things: If the individual is robust, in good health, if his tissues present a normal tonicity, if the conjunctiva be healthy, inoculation causes almost certainly the development of conjunctivitis, which may be catarrhal, purulent, or even diphtheric or simple traumatic conjunctivitis. Ninety-nine times out of a hundred this is the case. Perhaps one time out of a hundred, one of these affections is accompanied by veritable trachoma.

If, on the contrary, the individual is in a bad state of health, especially if he lives in the same region as the person from whom the inoculating mucus was taken, and is in consequence subjected to the same influences, the phenomena which takes place after inoculation, follow the inverse order from those cited above. There are ninety-nine probabilities out of a hundred that the conjunctivitis developed in this case will be accompanied by trachoma, and one out of a hundred, on the contrary, that it will not. I will, later, take occasion to recur to this controverted point in treating of the ophthalmia styled military.

By the preceding, it will be seen that we reject entirely the theory of contagion by the granulations themselves, and we concur fully in the opinion of P. Blumberg, that it is not the granula-

tions themselves which are contagious, but the conjunctival catarrh which always accompanies them.

TREATMENT.—This should be directed to the malady itself, or against its complications. But let us first correct an error into which many fall, and which consists in desiring at any cost to destroy the granulations. Now, a point that must not be lost sight of is, that the destruction of granulations, whether of papillary engorgement or engorgement of the lymphoid cellules, can not be attained without inducing at the same time the destruction of the conjunctival tissue.

It is not strange, then, that we regard with the utmost disapprobation the more or less extended scarifications and excisions of the granulations or of the conjunctiva, extolled by the most ancient writers (Hippocrates "*teri opsios*," edition of E. Littré, t. ix.; translation by Sichel, Sen.), and still in favor with a certain number of practitioners. This practice has for its least inconvenience the development of cicatrices and bands in the conjunctival tissue, which bring in their train the most troublesome consequences—conjunctival cicatrices—which we seek to avoid as much as possible. In our opinion, the true desideratum in the treatment, as well of engorgement of the papillæ as of the lymphoid cellules, is to favor the development of acute inflammation of the conjunctiva, which determines the genesis of a number of enlarged papillæ, leads to a more considerable bloody afflux, and which should cause the resolution of the existing granules.

In papillary engorgement, the object desired is to cause the development of the papillæ to such a degree that they will crowd each other out. In engorgement of the lymphoid cellules, on the contrary, the end which we seek to obtain is the development of "mixed granulations"—that is to say, the simultaneous development on the conjunctiva of both forms, and the substitution of papillary engorgement for engorgement of the lymphoid cellules. Now, in order to obtain these two results, it is not necessary to employ violent means. De Graefe, in fact, has shown by a series of experiments made in relation to this subject, that we may employ in the cure of papillary engorgement, applied directly to the surface of the mucous membrane, the most diverse means, provided that they act as irritants. Bicarbonate of soda, which, no one will deny, should be regarded as the lowest in the scale of medicaments of this order, has been recognized by him as perfectly suffi-

cient for attaining the desired end. We should always bear in mind that in view of the mildness of its action, its employment requires to be too prolonged, which causes great inconvenience among the laboring classes, whose time is most valuable. Our present intention not being to pass in review the entire list of means which are employed in the cure of granulations, we content ourselves with giving a statement of the method of treatment with which we have succeeded best.

In the first place, direct touching of all the surface of the mucous membrane with a saturated solution of absolutely neutral acetate of lead, followed by lavings, several times repeated, of the affected parts with distilled water, in order to prevent the formation of precipitate of carbonate and sulphate of lead, which has the disadvantage of forming a white deposit, incrusting the folds of the mucous membrane, and which it sometimes requires a long time to remove. Notwithstanding this care, it sometimes happens that deposits of this nature remain on the conjunctiva. It is sufficient in this case to touch the parts covered by the deposit lightly with a pencil of the mitigated nitrate of silver. This practice is followed by the formation of a very superficial eschar, which, in disappearing, leaves a deposit of salts of lead. However, these deposits are not here as troublesome as when the cornea is involved. In this last case, when a similar deposit is formed on an ulcer of the cornea, the deposit soon disappears spontaneously; for when the healing period of the ulceration begins, the epithelium is formed in the area of ulceration, beneath the lead deposit. Our Belgian confrères have advocated the systematic employment of this means in the treatment of granulation. From time to time, very slight touches, with a well-polished crystal of sulphate of copper, in such a manner as to avoid bleeding the mucous membrane, is advisable. Besides this we gain great advantage by the daily employment of fomentations of three parts of common to one of distilled water, saturated with chlorine. Bathing the entire surface of the mucous membrane with this chlorureted solution, produces the most salutary effects by modifying the mucous secretion. (De Graefe.)

Hairion has advocated, not without reason, the employment of tannic mucilage, of which a solution of one or two parts to a hundred of pure tannin in pure and neutral glycerine, will answer perfectly. The various means which we have enumerated will almost always be sufficient to relieve the patients in from three to four months.

In the case of engorgement of the lymphoid cellules, there is great advantage in arresting the disease as rapidly as possible, and, with this object in view, if it is practicable, the opening of each of the engorged lymphoid cellules with the point of a cataract needle, renders as great assistance as the opening of variolous pustules with the lancet, in proportion to their development. But, besides its often being impossible for the patient to submit to continued observation, it is well to remark that quite a number of engorged cellules are too deeply situated to be accessible to vision or to instruments; moreover, we are compelled to remark that the opening of each of these cellules causes the formation of a scar in the mucous membrane—an inconvenience which, as we have before remarked, should be avoided as carefully as possible. On the other hand, the manifest tendency of this disease to a chronic progress causes us to strive to obtain as quickly as possible the substitution of acute for chronic progress of the disease; as in diphtheric conjunctivitis, we have at our disposal a remedy, as it were, marvelous. This is the pencil of nitrate of silver, mitigated by the addition of nitrate of potash in the proportion of two to one, which, as it is very slightly soluble, moderates advantageously the influence of the lunar caustic; in fact, we can, with the crayon, touch only the points of the mucous membrane in which we desire to provoke acute inflammation, without affecting other portions of the conjunctiva. Moreover, by exact neutralization of the excess of caustic employed, we are sure of not causing irritation which will pass beyond the limits of an inflammation which we are able to control.

In consequence of the employment of this means, there is found in the circumscribed points of the mucous membrane a slight scar, which generally disappears, except in rare instances, in from twelve to twenty-four hours. We can then employ, without danger, the different means above spoken of, and which only serve as adjuvants to the treatment.

There should be a slight cauterization with the mitigated nitrate of silver two, or at the most three times a week, when the progress of the disease is chronic and when the mucous membrane reacts but little under the treatment. The day following the employment of the nitrate, there should be light touching with the solution of acetate of lead. On the third day, light cauterization with the crystallized sulphate of copper should be employed. The fourth day, use the acetate of lead again. The fifth day, return to the lunar caustic, and so on. This is our usual method of treatment.

Be it understood that this succession in the employment of the remedies may be modified according to the actual symptoms, and we do not pretend to lay down an invariable rule. Lastly, we derive great advantages from the employment, in conjunction with these remedies, of the chlorureted water and solution of tannin in glycerine, as in the treatment of engorgement of the papillæ.

In one, as in the other form, we observe nearly always a noticeable photophobia, as well as a certain degree of hyperæmia of the iris, for which the employment of a collyrium of atropine is of great advantage. If, during the course of the disease, a more or less pronounced degree of œdema of the lids supervenes, several light applications of the tincture of iodine will cause this to rapidly disappear.

In regard to the complications of which we have spoken as being liable to occur during the course of the disease, it is unnecessary to remark that they should be subjected to appropriate treatment, which will be considered hereafter, when we speak of the affections themselves. But, in the majority of cases, the complications often disappear and diminish noticeably in proportion as the disease on which they depend becomes less and less marked. The treatment of one of the complications merits our attention an instant. I speak of atrophy of the conjunctiva and of the contraction of the mucous membrane, which succeeds it, or which is often the consequence of the development of conjunctival cicatrices, consecutive to excision, or to extensive or ill-timed scarification, or to lymphoid engorgement in the fourth period.

When, in their normal state, we open widely the eyelids of a healthy person, by raising the superior and lowering the inferior with the aid of both thumbs, applied to the middle of each, we observe that the external commissure is greatly extended, and that the angle of the corresponding palpebral cleft remains perfectly defined. In the case of constriction of the mucous membrane, on the contrary, we notice, under the influence of the same maneuver, the external angle covered with a fold of integument directed vertically from above below, and beneath which the external commissure is more or less concealed. The formation of this fold we consider the pathognomonic sign of contraction of the conjunctival sac, and the formal indication of the necessity of the little operation which I am now going to describe, and which has, from remote times, been known as the operation for blepharophimosis or canthoplasty.

The surgeon, by means of the thumb and index finger of the left hand, stretches firmly the skin of the lids, in order to force them apart. Armed with a pair of straight scissors, one of the blades of which he introduces into the external angle of the conjunctival cul-de-sac until it reaches the bottom, while the other is passed in front of the integument, he incises at one stroke all the external commissure, thus prolonging the palpebral cleft from four to five millimetres.*

If we then renew the maneuver of separating the lids, we have before us a lozenge-shaped wound, whose great axis is vertical, and the small axis transverse. The superior and the inferior angles are produced by the union of the mucous membrane with the skin at the two former points of commissure. The other two angles are produced—the internal by the extremity of the incision in the mucous membrane, the external by the extremity of the cutaneous incision. At this moment an assistant turns back both lids, a maneuver which results in the transformation of the lozenge-shaped into a vertical linear wound, which the surgeon has only to unite by means of three points of suture—one placed at the middle of the wound, the others at equal distances from the first suture and the extremities of the incision. A strongly compressive bandage is to be applied, which has the advantage of preventing inflammatory œdema of the lids. At the end of from twenty-four to forty-eight hours, reunion by first intention is complete. The sutures are now to be removed, and it only remains to combat by means of emollient fomentations the slight traumatic inflammation which results from the operation. At the end of from eight to ten days all traces of the operation have disappeared; the lids open widely, and the only trace which remains of the operation is an external commissure slightly obtuse, and devoid of lashes for an extent of from one and a half to two millimetres on each lid.

EGYPTIAN OPHTHALMIA.

Under this name has been described at one time engorgement of the papillæ; again, engorgement of the lymphoid cellules.

The reader must not expect us to give here a description of these two diseases, upon which we believe we have dwelt sufficiently.

* In a paper just received from Dr. C. R. Agnew, New York, at this point he divides the upper portion of the external canthal ligament vertically and subcutaneously.—H. C.

We will content ourselves with mentioning the deplorable misunderstanding which prevails among the medical public in regard to this affection, and with remarking that if we are not better agreed upon this subject, it is due to no other cause than to the confusion which, as we have before said, prevails in regard to granular conjunctivitis in ophthalmological nosography. It is sufficient to remark that Egyptian ophthalmia, as well as military ophthalmia, of which I shall speak presently, is nothing more or less than now one, now the other of both forms of the disease heretofore described, developed by endemic agencies in individuals of the same constitution subjected to the same unfavorable hygienic influences, mode of life, climate, and, in a word, to the same morbid causes. The frequency of granular ophthalmitis in Egypt, and especially among a certain class of society (the Fellahs), results from bad hygiene, personal uncleanness, and especially from atmospheric causes. Every one is familiar with the fact that the desert winds—the simoon or sirocco—at times blow over Egypt. The air of these dry winds is charged with dust and sand, and in this country we find trachomatous ophthalmia accompanied with the presence, on the edge of the lids, of veritable calculous crusts, deeply imbedded in the cutis of the lids, and which, when raised, leave exposed deep and bleeding ulcerations. These dusty and sandy particles are even carried by the wind into the conjunctival cul-de-sac, and cause a continued irritation of the mucous membrane, which very soon develops into engorgement of the lymphoid cellules.

In support of the theory here maintained by us, it is sufficient to cite the following judicious remark of P. Blumberg: “These so-called trachomatous glands, before their discovery in man, had been recognized in animals toward the internal angle of the eye—that is to say, in consequence of the position which the eyes occupy in *animals*, toward the *anterior* angle of the eye. These glands come in contact with each other, especially at this point, as it is at this angle, from the constant exposure of animals to dust and wind, that particles of dust and sand blown into the eye remain there, one might almost say permanently.” Let us remark, moreover, in support of the same author, that in swine the trachomatous glands have been observed to be most numerous. The probable reason for this is, that in rooting in the ground in matter of all kinds, these animals are constantly introducing into the eyes foreign bodies of different varieties.

MILITARY OPHTHALMIA.

It is difficult for us to admit, as is affirmed by certain writers, and in particular Hairion, that this disease was entirely unknown in Europe before the return of the remnants of the French and English armies from the Egyptian expedition, at the close of the last century. We protest against its being regarded as a special or specific malady. If it still prevails in the armies of certain countries, while it has disappeared from the midst of the troops of other nations, the probable reason for this would seem to be, that in certain lands of different climates, endemic ocular affections prevail, accompanied by mucous secretions, which the recruits taken yearly from these countries and distributed among the different regiments, communicate to their comrades.

Now, in enumerating the causes of engorgement of the lymphoid cells, we have cited among the most numerous, overcrowding, bad hygiene, want of care and cleanliness, etc., and whatever can bring on relaxation of the tissues. We have spoken also of the development of the malady in individuals living in the same hygienic conditions, and who will deny that an army presents these. Common fare, overcrowding, miasmatic exhalations, insufficient and badly prepared nourishment, want of or imperfect cleanliness, etc., all favor the development of the disease in question. These adjuvants are sufficient, and plainly account for the sudden appearance of trachoma in persons before unaffected by the disease.

If the malady disappears from the midst of an army, the reason is probably that in the countries from which the army is recruited contagious ocular affections do not exist except in a sporadic form, and doubtless the recruiting system, and especially the system of medical revision, contributes strongly to this result. It seems indubitable to us that if the army in which military ophthalmia prevails were disbanded for a year or two, and if, under a new call to active service, care were taken to eliminate vigorously every man showing a suspicious state of the conjunctiva, the prompt and sure means of putting an end to this scourge would be attained, with great advantage to the soldiers and also to pathology, one of the most obscure of whose problems would then be elucidated. Another means for combating the disease and clearing up this question, consists in recruiting regiments by the province, district, or department—a measure which we are convinced would reveal that in certain regiments the men are affected with military ophthalmia, while in others they remain completely exempt from it.

In examining individuals before forming the future contingents of the provinces corresponding to the regiments, and among whom trachomatous conjunctivitis exists, there is no doubt that quite a number of these future recruits will be found to be affected with contagious conjunctivitis, prevailing endemically in the province, and nothing would be easier than to reject as contagious all recruits affected with granulation as we reject all attained with syphilis. The changing of the garrison of regiments from one province to another must be avoided, and troops must be left cantoned in their original provinces, in order to avoid the transportation of the disease endemically from one province to another which has not been subject to it previously, and in which it loses no time in making its appearance after the arrival of a garrison of troops in which men are found affected with the disease.

Art. 2.—Is Alcohol Food?

In discussing a question of such vital importance to the moral, pecuniary, and sanitary condition of our race, it should be our object to give it a candid and scientific hearing, and if an error be committed in any direction, it should be in favor of reform rather than in favor of a depraved appetite.

And as a large number are addicted to the use of alcohol in our common beverages of the day, and think more of it than of their best friend's body or soul, and it being the source of three-fourths of our crime and misery and imposing upon us a tax of over one million dollars annually, and costing us fifteen dollars to support or sustain it where we get one from its revenue receipts, we see no good reason, as a matter of policy, saying nothing of its immorality, why we should not make an effort to remove the curse, not only by moral means, but by legislative enactments—not simply because it is an acknowledged poison, but because it is doing us, as a nation, more harm than good.

And we propose, candidly and scientifically, as far as we are able, to present facts negating the assumption that alcohol forms any part of the aliment of man, but in a measure prevents digestion and assimilation. And in speaking of its history, we care not how anciently it may have been used, for biblical history tells us

that sin and deception was practiced even as early as in the garden of Eden.

But some very worthy members of the medical profession claim and assert that alcohol acts as food, and that the human family can not do without it in health or in disease. And here we are ready to admit that it is useful in medicine as a narcotic, just as is opium, aconitum, belladonna, and hyoseyamus. And we propose to look at this matter in a candid and unbiased manner, and produce evidence of a reliable character from our best scientists and chemists, both ancient and modern.

And to come at once to facts in this discussion, it will be appropriate to ask, "What is alcohol?" Wood and Bache says it is a liquid generated in vegetable juices and infusions by a peculiar fermentation called vinous or alcoholic, all of which juices contain sugar in some form. Alcohol is never produced except as the result of decay or an entire chemical change, and is composed of carbon, hydrogen, and oxygen; consequently, belongs to the class of hydro-carbons. To fully understand how alcohol is to act as food, we must know whether it contains the elements of which the body is composed, or whether it has the elements to supply waste tissue.

And here it would be proper to inquire of what the body is composed and the physiological changes which render food necessary for aliment, and does the substance under consideration by any chemical change fulfill the necessities required. The chemical examination of the human body develops a variety of compounds which are susceptible of reduction to simple ones. Albumen is found in blood and nerve matter, the analyzation of which gives protein ten parts, sulphur two, and phosphorus one. Fibrin found in the blood and muscles has protein ten, sulphur one, phosphorus one. Protein is a compound of carbon, oxygen, and hydrogen. Fat with some is very abundant, which gives rotundity and form, and analysis shows it to be composed of stearine, oleine, and margarine or carbon, hydrogen, and oxygen. Gelatine is found in some of the tissues of the body, but water composes the greater part of the animal structure. It enters into all the tissues, and were it not for this pure element, composed of hydrogen and oxygen, the system would crumble to pieces.

The blood is four-fifths water, and is the vehicle for conveying to all the tissues the nutritious substances to support the different organs and for throwing off obnoxious and injurious substances when formed in, or taken into the system.

The blood also contains a variety of earthy matter, as lime in bone, silica in nails and hair, iron in blood, etc. There is also found common salt, potash, soda, etc. One gallon of blood is said to contain nearly an ounce of saline matter.

If the human body is composed of the above substances, any article suitable for food should contain some of the primary elements entering into its composition in such a state of combination that the stomach or some other portion of the system may decompose, handle, and appropriate as nutriment; for observation and experience has taught us that all which goes into the mouth does not nourish a man, but only that which the stomach can handle, or the body work up into its own structure. It is self-evident that the earthy and mineral substances, in order for the system to appropriate them, must be combined with vegetable or animal matter.

We have seen people eat coal (carbon), slate pencils (silica), but rather than grow fat and robust, they become thin and waste away.

Milk is an article of diet which will sustain life, and is composed of all the elements the body requires and in such a form that the system may readily appropriate them. It is composed of water, mineral matter, sugar, butter, and caseine—analogous to albumen, the great sustainer of human life.

There are certain physiological operations going on in the body which require the use of food or something to supply waste. To enjoy health our bodies must have a certain temperature regardless of externals, and that is about 98° F. Persons have been subjected to the extreme external heat of 300° , sufficient to roast meat, with plenty of good water and atmospheric air to breathe, and come out unbaked; also be placed on the polar ice with the mercury at 20° below zero, properly clothed and fed, with the body indicating in both instances about the usual temperature (98°), yet there is going on in our lungs, in the cellular tissue, a combustion which demands feeding.

Another process is that of assimilation or conversion of nutriment into solids or fluids of the body; also the process of disintegration, the pulling down or wasting process, and these are continually being carried on to enable us to speak or move, which wears away some of the delicately formed and complicated machine. Our involuntary acts produce friction and wear, which waste must be supplied, and to accomplish this a fresh supply must be forthcoming from some source, and this must be from proper food; which change physiologists are pleased to call metamorphosis,

and this is so rapid that the whole body, bone and muscle, is said to undergo an entire change once in seven years.

It is evident that substances forming the human body can only remain in a healthy condition a certain length of time without some means of supply, and anything retarding or hastening this change must prove deleterious to the health of the body. And should anything hinder this process of throwing out the unnecessary and worn-out particles or poison that enter the system, called elimination, it should not be called food for that supplies waste.

While disintegration is going on, if by anything retarded, albuminous structure may be resolved into lithate of ammonia, and gelatin into lactate of urea, which are poisonous, and should they remain long in the blood, they would produce their characteristic symptoms—profound stupor and subtle poisoning.

And thus we see the necessity of a vigorous performance of all the eliminating functions, that the body may be thoroughly cleansed and in a state of health. Upon this theory do our large towns observe strictly sanitary measures, by keeping sewerage pipes well open to prevent epidemics, and the great sewerage to the human system are the bowels, kidneys, skin, and lungs, and if kept in a healthy condition, and not retarded or clogged, and proper food taken, the machine will run smoothly, but if retarded by any substance, disease will be the result.

To keep up a supply of waste tissue and support combustion, three kinds of food would appear necessary—tissue-forming food, heat-producing food, and auxiliary or helping food. Tissue-forming food requires a diet containing nitrogen, as albumen, fibrin, and caseine—and they are called protein compounds; and this great life-sustaining element, albumen, can not be formed in the body except from a protein compound, and thus water, fat, starch, and sugar can not be converted into muscular or nervous tissue. Nearly all of our food, as well as the atmosphere and water, contains elements of poison, but not in such a combination as to be poisonous; and notwithstanding God is the author of all these elements, we rejoice to know that He is not the author of some poisonous combinations, and certainly all the combinations which produce so much narcotism and misery, the removal of which should never be called ridiculous or absurd.

Heat-producing foods are those, which, by combustion, produce heat, as starch, sugar, and fat. These are called carbonaceous compounds, and are consumed in the system to produce heat, very

much like the burning of a tallow candle. By lighting the candle, the oxygen of the atmosphere unites with the hydrogen of the tallow, forming water, that passes off in the form of steam, and the oxygen, with carbon, forming carbonic acid gas—a process similar to that in the body, only the latter, in a much less degree, and in a ratio proportionate to the amount of heat; the temperature of the burning candle being 700° , while that of the body is only 98° . These substances, or heat-producing foods, are taken into the body and oxidized, or burnt, partly in the lungs and partly in the capillary vessels, as above described, thus maintaining the heat or temperature of the body, unless something is thrown in which interferes with this process of combustion and elimination.

And we claim that alcohol retards this process by its narcotic effect, reducing atomic changes, undecomposed in the body, and not uniting with oxygen, which would increase its poisonous effects, by forming methyl alcohol, which is more penetrating, corrosive, and nauseous. And the albumen, which is abundant in the stomach, and forms the principal solids of the body, chemists consider insoluble in alcohol, and consequently can not be distributed to supply waste tissue when this substance is present, but lies coagulated or hardened, as does muscular structure outside of the human body, and can not act as heat-producing food when retarding action which helps the heat-producing process.

To make our position more admissible and stronger to your many readers, we will quote from a few reliable authors and experimenters. And, first, Dr. Mussey on the effects of alcohol in health and disease, in the *Transactions of the American Medical Association*, page 574: "If alcohol combine with the atmospheric oxygen admitted to the lungs in respiration, it is natural to ask, why is there not, at the same time, an increased exhalation of carbonic acid? But so far from this being the fact, it has been clearly proved, by the experiments of Dr. Prout and others, that the amount of carbonic acid discharged from the lungs, while alcohol is in the circulation, is remarkably diminished." Indeed, we are deficient in evidence of the decomposition of alcohol in any part of the circulation to afford material for maintaining the vital temperature.

In a prize treatise on the action of alcohol, Drs. Lallemand, Perin, and Duroy say, "that carefully conducted experiments result in the discovery that alcohol is eliminated, unchanged from the body."

And in the French experiments, by Dr. W. B. Carpenter, in the delicate tests with bichromate of potass. in sulphuric acid, "It was found possible to detect alcohol in the breath and other emanations, of persons who had taken even small doses of alcohol, which turned the red liquor to an emerald green, by decomposing the chromic acid and reducing it to the condition of green oxide of chromium." The experimentalists justly laid stress on the fact, "That it is not the mere excess of alcohol which the system can not profitable use up that finds its way into the excretions, for they detected alcohol in the urine of a man, within half an hour after he had taken no more than one ounce of brandy; and after drinking one bottle of weak wine, a continual elimination of alcohol, by the lungs, for eight hours, and by the kidneys, for fourteen hours, was observable." Showing conclusively that alcohol is not decomposed in the system or unites with oxygen in the lungs.

Substances coming under the head of auxiliary foods are water, salt, iron, etc. The salt performs the function of holding the albumen and fibrin in solution, and aids in absorption as well as entering into the formation of hydrochloric acid of the gastric juice, which greatly assists digestion. The iron giving vitality to the blood, general tone and vigor to the system, while water is the great solvent of the different articles of food.

We have very imperfectly and briefly explained the nature and use of food, and are now ready to inquire whether alcohol fills the requirements, and if so, to which class does it belong?

Unbiased science says that it is not flesh-forming food, for it contains no nitrogen; therefore, it can not feed muscles and nerves. Prof. Liebig says, that "beer, wine, spirits, etc., furnish no element capable of entering into the composition of blood, muscular fiber, or any part which is the seat of the vital principle." And Dr. Carpenter, in his physiology, 4th edition, page 328, says: "Alcohol can not supply anything which is essential to the due nutrition of the tissues." The physician to the King's College Hospital, Dr. Beale, says: "Alcohol does *not* act as food; it does not *nourish* tissues; it may diminish waste by altering the consistence and chemical properties of fluids and solids. It cuts short the life of rapidly growing cells, or causes them to live more slowly. The remedies which act favorably really seem to act not by increasing vital powers, but by decreasing the rate at which vital changes are proceeding." So, if the theory of this eminent English physician be correct, alcohol

can not be tissue-forming food, but actually retards the nutrition of the body.

Can alcohol be considered a heating food? We know that many take it to keep them warm, and as many to keep them cool. However, science says *no*, because it contains no fat, starch, or sugar, notwithstanding it contains carbon and hydrogen, some of the elements of these, as does some of the corrosive acids, which, instead of acting as food or fuel to the body, would rapidly consume its tissues.

Alcohol does not act as food or fuel in the body, but converts the body into fuel, which has been known to be destroyed by spontaneous combustion. Carbon and hydrogen enter into the composition of alcohol as elements, but not in such a way that the stomach or body can appropriate them as heating food; if so, it would increase rather than diminish the exhalation of water and carbonic gas, these being the products of combustion, and that it would maintain the temperature of the body at 98° , whereas it actually retards it. But scientific experiments show that these are not facts. The amount of water and carbonic acid gas passing from the lungs is lessened, the temperature of the body lowered, and the action of the skin is also lessened. Then alcohol is not a fuel food, for, instead of aiding combustion and maintaining the heat of the body, it retards combustion and lowers the temperature,

It now remains to be seen whether science acknowledges alcohol as auxiliary food. And we answer that it does not take the place of water, for the system needs that and retains it for various purposes, whereas alcohol is not changed, but eliminated like other deleterious substances, as soon as possible. Water is an auxiliary; it holds the organizable materials of the blood in solution and suspension, and assists in conveying them through the capillary pores to form solid tissues, and it is water which unites with the different component parts of the textures to give consistence, and this is the element which takes up and carries off the products of decay. No other liquid can take its place, and certainly not alcohol, for it passes through the system unchanged, and is thrown off as fast as it is possible for the organs of elimination to accomplish; and as it can not unite with the substances in the stomach, it is taken up by the absorbents and carried to all parts of the body unchanged, which may be detected in the urine, breath, blood, and brain, as a matter of course in proportion to the amount taken, producing drunkenness and delirium, and tends to antagonize

many of those purposes which water serves, by precipitating most of the organic compounds.

Neither can it take the place of potash, iron, or salt, for they greatly assist in the formation of the protein compounds; but when it is put into the stomach it produces a white precipitate, actually preventing digestion by coagulating the pepsin, the essential element in gastric juice.

If a person takes alcohol in any form—beer, wine, or whisky—just before or immediately after eating, digestion must be retarded until it is taken up by the absorbents and carried off through all parts of the system, remaining alcohol in the breath, brain, and lungs, unchanged, whereas the other auxiliaries assist actively in digestion—salt, by providing chlorine for the hydrochloric acid of the gastric juice, potash to prevent scurvy, and iron to prevent anæmia, while alcohol retards also the oxidation of the blood. Prof. Miller says “that less carbonic is evoked during the presence of alcohol in the blood, making it much darker; and it retards the chemico-vital process necessary to a normal condition, and thus the oxidation of phosphorus of waste tissue is sometimes so interrupted by alcohol that the body of the drunkard smells of phosphorus, and his urine has been known to be illuminous.”

From the foregoing we must come to the conclusion that alcohol is not food, for it neither warms nor nourishes the body, and it possesses not one of the great distinctive features of aliment, and the system treats it as an irritating or foreign substance, and gets rid of it as soon as possible.

All are ready to acknowledge that food is taken into the stomach, digested, used up in forming the different tissues and blood, and never reappears in the same form, but produces force, heat, and keeps up the equilibrium necessary for growth and fatigue. But alcohol can not be considered an aliment, because it remains in the blood unchanged; no trace of decomposition or destruction can be discovered; it is eliminated, unchanged, by the excretory organs, and it gives rise to a peculiar phenomenon of the nervous system too frequently observed by us on Sundays and holidays. Not a supporter of combustion, it is not assimilated, and in this age of scientific research, can not be called food.

It is very true that alcohol and the common intoxicating beverages contain water, and if it was not poisoned water, we could not object to the quantity used in the adulteration of our liquors. Notwithstanding it may be used in such minute quantity that the

doses might be called homeopathic, and considered all right in medicine, it will not answer when applied to food, for our system can not be sustained on infinitesimal doses of food. To illustrate: Beer contains one per cent. of nutritive matter, and should it be called food, it would be proper to consider it in homeopathic doses.

One glass of wine does not contain as much nourishment as may be found in one grain of wheat. Prof. Liebig says that twenty barrels of good Bavarian beer contain no more nourishment than a five-pound loaf of bread or three pounds of beef. So if a person consumes six or eight quarts of beer daily, in the course of a year he would get about as much nourishment from it as is contained in a good loaf of bread. This is too infinitesimal for food.

Some objectors to our theory claim that we must not use bread if we reject the use of alcohol altogether, for it contains alcohol. In answer, we say that during the process of raising or fermentation a small quantity of alcohol is formed, but this is so completely expelled during the heat of baking, that in a well-baked loaf chemists fail to find even a trace of alcohol. Objectors say many useful articles of diet contain poison, and why not reject them as well as intoxicating liquors? Let us see how this is with the two articles, salt and water. The former contains chlorine, which is a suffocating gas, and sodium, a poisonous mineral, but it is neither chlorine nor sodium, but chloride of sodium, which, in that combination, is not a poison, and only its elements are so; whereas, alcohol is in the system as a poison and unchangeable.

Suppose water does contain poison. We don't drink it simply because it does, as we do alcohol, but we try to get as pure an article as possible, and sometimes it is distilled to make it more so, and free from poison and the numberless animalcules which it contains in quantity sufficient to make homeopathic doses of animal food; but it is not so with the drinkers of alcohol, for were you to distill it to remove the poison, the tippler would not hanker after or even take it.

Switzerland, as a nationality, has been mentioned as an example for using light drinks, as wine and beer, as a large portion of their aliment, with scarcely any drunkenness. But history informs us that this nation has more intemperance than France, Italy, or Germany, and that wines and beers are very largely used, and schnapps, a species of brandy, to great excess by the peasantry.

Some also tell us that the common beverages of the day which contain alcohol must be nourishing, for people grow fat on beer; but it only prevents the elimination of water and the combustion of fat and waste tissue, and consequently they may bloat and puff a man, yet experiments show that it is only retarding atomic changes and secretions, and consequently diminishing the loss of weight by diminishing eliminations; and some are pleased to call it nutritive simply from this puffing process from want of proper eliminations in consequence of the presence of alcohol. And while it diminishes the atomic changes, it also diminishes the amount of oxygen taken into the lungs; consequently the carbonaceous elements of the blood and tissues do not become oxidated as fast as when alcohol is not present, and hence the accumulation of fat. So we see that the increase in bulk and weight is not from the nutritious matter contained in alcohol, but a slow accumulation of hydro-carbon from retarded metamorphosis or change of function; and those who claim that to diminish atomic changes is a nutritive action, forget that all the phenomena of life in the physical organization are the direct result of such changes, and whatever diminishes these, diminishes life, and if the above were not correct, all a man would want to live on, indefinitely, would be something to stop these changes.

But experience and statistics show that in military and civil service those who use beer or whisky lack the strength and power of endurance possessed by abstainers, and if any accident happen or epidemic prevail among those addicted to the use of alcohol in any form, they invariably prove more troublesome to the attending physician.

Cases are recorded where persons have lived weeks on brandy alone. Brandy, if good, contains about sixty parts water and forty parts alcohol. So you see the man was kept alive on water and alcohol; and which do you think the most sustaining? We know of more cases that were kept alive as long on water alone, but none on alcohol alone. And we venture to say that in those cases kept by brandy, if you had taken the alcohol out, the same and even a better result would have been obtained. And with all the experiments and experience of unbiased scientists, these facts are positive ones; and to call alcohol food in the face of all this knowledge of its effects and non-decomposition by any fluids or solids of the body, is an abuse of knowledge and against the recent researches of chemists and scientists.

Art. 3.—Ulcerative Chronic Laryngitis.

By BERNARD TAUBER, M.D., Cincinnati, O.

In this affection all the symptoms of chronic laryngitis are more intense, and additional, we observe the mucous membrane ulcerated in several places, most frequently upon the posterior laryngeal wall, the ary-epiglottic folds, and the posterior portion of the vocal cords. Upon these localities we discover small irregular papillary excrescences, sometimes of consecutive tissue elements. The constant contact of the swelled parts—namely, of the posterior laryngeal wall, the petiolus, the ligamentary-epiglottic and principally the posterior portions of the vocal cords—mechanically favor the production of ulcerations. We must not forget that individuals predisposed to tuberculosis, or those who have been afflicted with syphilis, are prone to ulcerative laryngitis. Another cause for this affection is the individual predisposition. Some may have a chronic laryngitis for years, and the mucous membrane will not become ulcerated; again, with others, ulcerations will appear after a short time. In most instances, the trachea and epiglottis participate in the inflammation more or less. The latter is often thickened to a great extent, or may be flaccid and have undergone an alteration of shape. As the disease progresses, the symptoms become more and more distressing; the cough is more troublesome and painful; dysphagia is intense; deglutition, first, of liquids and later of solids, is nearly impossible, and what was swallowed is painfully regurgitated. Is the epiglottis also ulcerated at the sides, the pain runs into the ears; the voice, which was husky, becomes hoarse; the general system becomes affected with irritative fever; gastric and intestinal disorder supervene.

Laryngoscopically we observe an inflammatory swelling; the mucous and sub-mucous tissue is loosened and of velvety appearance; also infiltration of the glands, on which at the beginning we see small, flat, eroded little ulcers, or a deep single ulcer. The former lay superficial, sometimes confluent, and only at an accurate observation we can recognize the marked border surrounded more or less by an inflammatory circle, or they appear to be lined with very small papillary excrescences. Is the ulceration follicular, we observe a deep funnel-shaped ulcer, which is generally single; not very often we notice flat irregular ulcerations; sometimes there sprouts from the bottom of the swollen posterior wall of the larynx

a pointed papillary growth. The ulcerations are especially met with on the posterior portions of the vocal cords, on the vocal cords, on the posterior wall of the larynx, on the false vocal cords, on the anterior surface of the arytenoid cartilage, and on the petiolus. The prognosis is not so favorable as in simple chronic laryngitis.

In the treatment, the condition of the system and the local manifestations of the affection demand an equal consideration. Of the local remedies, nitrate of silver, either in solution from 60 to 240 grs. to the ounce of water, applied with a laryngeal camel-hair pencil, or the stick of caustic carefully applied every day or every other day, as the case may require, will be found most beneficial. I could enumerate a long list of astringents and caustics; but hospital experience abroad and my own observations confirm the above suggestion. The treatment must be energetic, especially when the ulceration is located at the portions of the local cords, as a loss of substance may set in, which will produce a loss of voice never to be remedied again. It is often necessary to touch some parts with the caustic in substance, by means of the laryngeal porte au caustique.

Art. 4.—Hemiplegia treated by large Doses of Bromide of Ammonia.

By E. E. RIOPEL, A.M., M.D., Cleveland, O.

In giving this experience in the use of the bromides, I am aware that I am liable to strong criticism, inasmuch as it varies from the standard treatment, and especially that advocated by Brown-Sequard and other noted men—viz., ergot, belladonna, strychnia, etc. I was led to this course some time ago, because the complications of the case demanded it, having left the paralysis to “take care of itself.” Seeing, however, that the paralysis gradually disappeared, I accredited the cure to nature, though with a strong doubt in favor of the bromide. I will give the cases in detail.

Mr. M. D., æt. 59; married; of temperate habits; formerly was nurseryman, but having failed financially, resorted to carpentering. While on a scaffolding five feet above the pavement lost his balance, and fell to the ground, striking his head about an inch to the right of the center of the position of posterior fontanel. Hemiplegia set in on the second day. Being delirious, I at once placed

him under bromide ammonia, grs. 20, every two hours till rest was procured. After having taken the third powder he went to sleep. The next day he again became quite restless, and had to be guarded constantly. I again directed the bromide ammonia, grs. 20, every two hours. He took four powders without any perceptible effect. I then ordered the dose doubled, and every hour. After taking four powders he went to sleep, and woke up in about six hours quite refreshed and with no further head trouble. By this time the hemiplegia was well developed. Having no control over the entire side (left side), as well as left cheek, I continued the bromide in grs. 40, doses every two hours, so that he took about 240 grains in twenty-four hours.

On the fifth day after paralysis had set in, there appeared a change for the better; the swelling that had existed in the left foot began to disappear, and on the eighth day he was able to lift his foot from the floor. On the fourteenth day was able to walk a little, dragging his left foot after him. On the twenty-eighth day was able to use his left hand sufficiently to feed himself. So on, the improvement continued. He is now quite well, with the exception of a disturbed mind. I would here state that on the seventh day he took 560 grains of the bromide before quiet was restored.

Case 2. Mrs. L. C., Scotch lady; very stout and fleshy; fell in the water by the upsetting of a skiff, at 6 P. M. She was taken home in a carriage, and at 8 P. M. I was called in, when I found her fearfully convulsed on the *left side only*. I administered opiates, with dry warm friction, etc., when profuse perspiration set in. The next morning the left side was totally paralyzed, with the exception of a slight motion of the toes; face not affected—the tongue, however, could not be protruded straight. Although from my experience of the former case with the bromide, I hesitated a similar treatment, because the lesion here must be below the pons varolii. However, after the effects of the opiates had passed away, she became quite restless. I commenced on 20-grain doses every hour, the third day 40 grains every hour; so that some days she took from 600 to 800 grains. On the tenth day she was dismissed as cured, having a return of the use of her limbs, with but a slight limping. Her arm, as she expressed it, “felt sleepy.” Her mind shows no disturbance.

Case 3. A boy, æt. 12; healthy; while racing, violently fell “dead,” as those with him said. By active measures was restored to consciousness, but with paralysis of the left side, including face and

tongue. I put him on 10-grain doses every hour of the bromide; on the third day increased it to 20 grains every hour; on the fifth day increased it to 40 grains, when an eruption appeared over the whole surface of the body, when I discontinued it for three days, substituting belladonna one day and nothing the other two days. I resumed the bromide in 30 grains every two hours. After the twenty-third day he was put on 20 grains every four hours, and on the fortieth day discontinued, as he had entire control over the paralyzed muscles. His mind is a little disturbed.

Case 4. Mr. M. W., æt. 61; having lived a "fast life," had a syphilitic lesion; producing paralysis of left side. Being of a very strong constitution, I put him on 60-grain doses of the bromide every two hours. On the third week had some use of left leg, so that he could stand without assistance; speech restored, and ptosis of left eyelid relieved. Has now partial use of the left arm. Though entire restoration is not looked for in this instance, yet the very improved condition leads me to believe that the bromide had much to do in the present improved condition.

Now, as to the anatomical changes, it would be mere speculation. Yet, unless it should be with concussion that extravasation took place, a speedy action of the absorbents would at any rate prevent any great change taking place in the brain substance. Now, then, may it not be proper to infer that the action of the bromide is more on the lymphatic vessels, stimulating them, rather than on the nervous system? And, in any case, if the nerves be simply irritated, preventing sleep, will not sleep be restored when that irritant is removed? And the bromides will do it, if it stimulates the absorbents.

Translations.

I.

PITYRIASIS CAPITIS.—Dr. Malasseux, who has carefully studied this disease, has found that a fungus is the source of this production. The indications, therefore, are for a parasiticide. He recommends the following :

R Ole. Theobroma, grms. xxx.

Ole. Ricin.

Ole. Amygdal. dul., aa grms. xv.

Turpeth's mineral, grm. i.

M.

Before using the ointment, however, the hair is to be clipped close, and the head thoroughly washed with soap and water. The ointment is then applied and well-rubbed in. It is used twice a day, morning and evening. All toilet articles that were in use previous to undergoing treatment, as brushes, combs, sponges, etc., must be thrown away. In order to avoid a fresh crop of fungi, the patient, during treatment, must avoid all barbers.—*Revue Medico-Photogr.*

II.

WHOOPIING-COUGH.—Dr. Wild reports in the *Weiner Allg. Mediz. Zeit.*, that he has succeeded in curing whooping-cough, in eight days, by the following treatment: The patient is not allowed to leave the room, and at each fresh paroxysm, a compress, folded in several layers and saturated with a teaspoonful of the following solution, is held to the mouth. The patient is thus compelled to inhale :

R Ether, 60 parts.

Chloroform, 30 parts.

Turpentine, 1 part.

M.

—*La Trib. Medicale.*

III.

SACCHARINE DIABETIS—ITS CAUSE AND ITS CURE.—Under the very attractive title of "Cure of Diabetes," Dr. A. de During has published an article in the *Revu. Med. de L'est*, of which we give the following summary :

Dr. During holds that saccharine diabetes depends on trouble in

the digestive organs. If the theories upon which the treatment is founded be contestable, the results of the treatment are not the less worthy of serious attention.

The alimentary regimen for a diabetic patient consists of 80 to 120 grammes of rice, gruel, etc., and 250 grammes of meat per day; the excessive appetite is assuaged with ice or ice-water. Daily promenades are recommended to the patient, according to his strength. Every morning, for two hours, the patients are enveloped in wet sheets, which, later on, are replaced by cold baths of short duration.

Of 95 patients treated by Dr. During, 28 were completely cured; 16 patients discharged cured, did not furnish him with any information as to their ulterior health; 11 patients discharged cured, had a return of the disease in consequence of a bad regime. With the others, the treatment was not continued for a sufficient length of time, for various causes.—*La Tribune Medicale*.

IV.

CANCROID OF THE EYELIDS—TREATMENT OF, BY THE PROLONGED USE OF POTASS. CHLORATE INTUS AND EXTRA.—Although the result obtained does not constitute any new fact, it is nevertheless worthy of the attention of practitioners, as it is of a nature to increase their confidence in a remedial agent very often forgotten in cases such as we are speaking of, substituting for it means more simple but less efficacious. The observations made and the patient cured were presented to the Medical Society of the Hospitals, by Dr. L. Vidal.

Lebrun, aged 72; commencement of disease in 1866, by a small pimple at the internal angle of the eyelids of the right eye. The ulceration spread linearly, and had lasted over a year when he consulted Velpeau, who diagnosed canceroid, and proposed to cauterize with the Vienna paste; the patient would not accede to this.

He had undergone various treatments, cauterization with cupri. sulphat., etc., when he entered the Hospital St. Louis, December 30, 1871.

From January 15, 1872, he was treated with potass. chlorate, 4 grammes in potion, and topical applications of the powder and saturated solutions. He left cured May 15, 1872, after four months of treatment. He continued to take, without interruption, for more than a year, the daily dose of 4 grammes of chlorate of potassa.

From the time of his discharge to this day, March 12, 1875, he has not had a relapse.

As M. Vidal remarked at the close of this interesting communication, it is the cutaneous cancrroids, the superficial ones, that are above all amenable to the chlorate of potass. ; they can also be advantageously treated with iodoform. The profound cancrroids which interest the cellular tissue and the muscles, are very generally subject to relapse.—*La Trib. Medic.*

V.

THE EUCALYPTUS GLOBULUS, PLANTING OF—A PREVENTIVE OF THE PHYLLOXERA (THE WORM SO DESTRUCTIVE TO THE GRAPE).—The *Medical Gazette* of Algiers, No. 5, 1875, brings the following under the signature of Dr. Bertharaud :

Dr. Cosson presented to the members of the Geographical Society of Paris the advantages produced by the planting of the eucalyptus globulus, in rendering salubrious certain unhealthy districts of Algiers. Thanks to the introduction of this beautiful plant, whose history and medical future M. Planchon has set forth so masterly in the *Revue des deux Mondes*, the malaria which formerly raged on the borders of Lake Fezzara, province Bone, has almost totally disappeared. Captain Ney has reported another case—the village of Ain Mokra, which has also been rendered salubrious. In this village, the center of extensive mining operations (magnetic iron, mokta-el-hadid, being found here), the military detachments stationed here, and the employes, until very lately decimated by the fevers, enjoy to-day a comparatively very satisfactory state of health.

But here is what promises more wonders. M. Cortambert, Jr., having planted the eucalyptus on a plantation in Provence (France), has observed that not alone has the fever disappeared from the place, but also the parasites who nourish themselves on the vine, and the redoubtable phylloxera, have deserted the vineyards of the whole surrounding neighborhood —*La Trib. Medic.*

VI.

CHLOROFORM IN LEAD COLIC.—The good effects of chloroform in lead colic, whether administered by inhalation or through the stomach, have been already many times demonstrated. The *Racoglitore-Medico* (No. 7) brings us a new proof of its efficacy in a case where other means failed. This case came under the observation of

Dr. Barduzzi. He administered the chloroform in potion according to the following formula :

Chloroform, grms. 4.
Syrup of gum, grms. 90.
Aq. destill. grms. 100.

M. To be taken in two doses at interval of a quarter of an hour.

In the case referred to, a like potion was repeated three times in thirty-six hours. At the same time, embrocations with chloroform were made upon the abdomen.—*La Trib. Medic.*

VII.

TREATMENT OF CEREBRAL RHEUMATISM BY HYDRATE OF CHLORAL.—NEW METHOD. (From report to Academy of Sciences.)—M. Bouchut communicated the following note :

The displacement of acute articular rheumatism and its transfer to the membranes of the brain, called cerebral rheumatism or rheumatismal meningitis, is always attended with great danger.

Pathological anatomy and ophthalmoscopy prove that this complication of acute articular rheumatism is a form of meningitis. Examination of the membranes of the brain reveals a considerable venous stasis, with an opaline infiltration of the pia mater—caused by numerous leucocytes.

The ophthalmoscope, that permits us to follow in the fundus of the eye the development of the alterations going on in the cerebral substance and in the meninges, shows a serous infiltration of the papilla and of the adjoining portion of the retina, with dilatation of the retinal veins, which represent the similar alterations of the pia mater and of the brain.

The rheumatism of the brain manifests itself by delirium, more or less violent, terminating in coma and in asphyxia, often so rapid as to cause death in several hours.

In three cases of this nature the patients were cured by the hydrate of chloral taken by the mouth, in quantity of three to six grammes, in one or two doses, one rapidly following the other, so as to quickly calm the agitation under which such patients labor.

VIII.

GELSEMINUM SEMPERVIRENS IN NEURALGIAS.—In the latest number of the *Centralblatt für Medic. u. Wissenschaft*, Dr. Jurasz, assistant physician Polyklinik, Heidelberg, reports the following

cases of neuralgia treated with the Tinct. Gelsemini, with most excellent results :

Case 1. Robust man, æt. 30 ; suffering for a week with a neuralgia of the first branch of the trigeminus, right side ; was treated with quinine, etc., internally ; also with various external applications, as ung. veratr. All in vain, however. Was put upon Tinct. Gelsemini, five drops three times a day ; complete cure in three days.

Case 2. Brachial neuralgia of one and a half year's standing in a robust seamstress, æt. 30. At first was treated with liniments, potass. iod., etc., internally ; all stopped ; ordered Tinct. Gelsemini five drops three times daily ; radical cure in six days.

Case 3. Old man, 64 years ; neuralgia of supra-orbital nerve. Tinct. Gelsemini, ten drops three times daily ; complete cure in four days.

Case 4. Neuralgia of the first and second branch of trigeminus, both sides, in a robust woman, æt. 38. Tinct. Gelsemini, five drops three times daily ; cured in twenty-four hours.

Case 5. Ischias of right side, very severe, in an old man 64 years of age ; could not use his lower limbs in consequence, and compelled to keep his bed ; all treatment ineffectual. Was ordered Tinct. Gelsemini, eight drops three times daily ; in fifteen days he was able to walk about ; cure completed by electricity and warm baths.

The doctor also states that in hemicrania and muscular rheumatism, he has found it ineffectual.

IX.

DYSENTERY—ITS TREATMENT WITH NITRATE OF SODA (*Saltpeter du Chili*). By Dr. CASPARI, of Wiesbaden.—Within late years a great number of memoirs on dysentery have appeared ; the most of them anatomo-pathological, that have done but little for its therapeutics.

Among the numerous remedies recommended for the cure of this disease, there is one that deserves especial attention, and that is the nitrate of soda. Although Bierbaum has said that it was only useful against the fever, but ineffectual against the dysentery, my experience has nevertheless taught me differently, and more especially had I learned to appreciate its value in the winter of 1870–71. In September, 18 per cent., and in October, 30 per cent. of all

patients entering the Frankfort Hospital, where I was on duty, had dysentery.

The results obtained in so great a number of cases are certainly conclusive as to the value of this agent in this affection.

Dr. Widlinger, one of my colleagues at the hospital, who likewise experimented with this remedy, obtained like good results.

The remedy is not new. It was already brought to notice, for this disease, in 1819, by Velsen (*Arch. f. Prakt. Medic. von Horn.*) It was used by Dr. Meyer (*Jahrb. der Therapie Hufeland*, Vol. 64, No. 4), who expressed himself as follows: "The results of my first experiments impressed me so favorably that I employed it very extensively, as did my colleague, Dr. Layel, during the violent epidemic which raged in 1822. The results obtained were most astonishing, the mortality being scarcely 2 per cent."

Rademacher, in his "Erfahrungsheilkunde," very clearly and instructively sets forth the failures that have followed the treatment of this affection with opiates and with laxatives, and the success obtained by the use of the nitrate of soda. . . .

As regards the therapie, Rademacher calls especial attention to the fact that the disease may attack either the rectum alone, or at the same time, and at times more especially, the small intestines. According to R., the two forms differ in this respect. In the intestinal dysentery, the whole intestinal tract, from the stomach to the anus, is affected; at first, however, the affection of the rectum seems to predominate, and manifests itself by non-feculent, liquid, sanguinolent discharges, with more or less tenesmus.

In simple intestinal dysentery, the rectal affection does not predominate; the discharges are thin, but feculent, and on account of the consensual affection of the gall-passages, of a grayish color. It presents great similarity to simple enteritis, and differs therefrom only in that it is much more dangerous, causing death in three or four days. This last form has, however, most likely never become epidemic, and only presented in isolated cases, during the prevalence of rectal dysentery.

Rectal dysentery is confined to the lower bowels, the other portions of the intestinal tract being either entirely free or but slightly implicated.

The symptoms by which these two forms may be distinguished from each other are very uncertain. The most reliable symptom in intestinal dysentery is feculent discharges, at the outset; sanguinolent mucous discharges—small in quantity, accompanied with

strong tenesmus—belong more particularly to the affection of the lower bowel.

R. remarks very pertinently, as regards the two forms and the difficulty in properly distinguishing them from each other, that although an intelligent division of the two forms is necessary for the saltpeter treatment, no harm can result from mistaking them in the first two days; after that, the results of the treatment will soon show the different forms.

The doses and method of administration vary according to the seat of the disease, as I have convinced myself by personal observation.

It is true that the two forms are sometimes mixed. Nevertheless, in intestinal dysentery, the number of stools is excessive, reaching as many as 30 to 40, or even more, through the day; the tenesmus, however, is not so severe. This affection may be properly called dysenteric diarrhea.

According to anatomo-pathological researches, rectal dysentery is a diphtheritic inflammation, while the dysentery of the small intestines is more of the nature of a catarrhal affection.

I have for a long time employed the nitrate of soda for both dysentery proper and the dysenteric diarrhea. The dose, however, must vary in these affections, on account of the difference in the inflammatory processes of the two forms, and it is important that it should be according to the degree of the phlegmasia.

In rectal dysentery, in a robust person, 25 grammes may be administered, in broken doses, in twenty-four hours. The medicament is dissolved in water, and given in a gummy solution. The dose oscillates between 15 and 25 grammes when there is no inflammatory complication of the small intestines. In light cases, improvement will follow in twenty-four hours; in severer cases, in two to three days. If there be no change within twenty-four hours, the dose should be increased. If the tenesmus has ceased, but symptoms of phlegmasia of the small intestines persist or supervene, the dose must be reduced to 8, or even 5 grammes (*pro die*).

Rademacher also says: "The administration of the nitrate of soda rapidly diminishes the abdominal pains and the number of the stools." He adds, furthermore: "If, when the tenesmus has ceased, an increase in the number of discharges should be remarked, it need not cause any anxiety, as it is due to the prolonged use of the remedy, and will rapidly cease."

If the affection be, however, more particularly of the small intes-

tines, the medicament must be given in smaller doses. Too large a dose will exaggerate the inflammation and the morbid manifestations. In these cases I generally begin with 6 grammes (pro die), in divided doses, given in an oily emulsion.

The medicine should be administered warm, as cold is contrary to this affection, and causes an immediate increase in the number of stools.

The medicine must be aided by strict attention to diet and hygiene. The patient must absolutely abstain from solid food, even for some days after recovery. In one of my cases—a strong, robust woman, who recovered after three days—the eating of a small piece of rye bread (against my orders) was immediately followed by a relapse.

In conclusion, I must say, the nitrate of soda is of unquestionable efficacy in dysentery, and I not only recommend it to my colleagues, but request them to follow my example.—*Deutsche Klinik*, Nos. 4 and 5, *Bulletin de Therap.*, 30 Juin.

PHILADELPHIA, September 14, 1875.

EDITOR LANCET AND OBSERVER—*Dear Sir*:—Our attention has been attracted to the article (page 523) of your September number on "The Use of Opium." In regard to the statement that "the manufacturers of morphia in Philadelphia say the demand for this drug is far in advance of their ability to supply it," we would say that this is an error, and can not conceive how it originated. The manufacturers have almost always a surplus stock on hand. It may occasionally happen (once every few years) that a *speculative* demand sets in, and the article is temporarily scarce, but this being over, parcels appear from many quarters.

We note the desponding view that the writer takes of the ability of the victim of the opium habit to abandon it. While the warning never to acquire it can not be made too strong, we prefer to urge that it can be cured, and to stimulate to effort in that direction, rather than leave the unfortunate in apathetic despair.

Yours truly, POWERS & WEIGHTMAN.

Selections.

Cerebral Disturbance in Small-pox. By H. ILLOWY, M.D. (Read before the Cincinnati Academy of Medicine, August 9, 1875).—Among the numerous complications that may arise to render this disease more grave and to diminish the patient's chances of recovery, there are none more frequent and more dangerous than those of the brain. Already at the onset of the disease, before the eruption has made its appearance, there are evidences of cerebral disturbance—in one case amounting merely to a headache, in others increasing to delirium and presenting the appearance of cerebral congestion. In this stage, however, the danger to the patient is not so great as with the appearance of the eruption (and to further this are the indications), the cerebral disturbance subsides, and the patient will get along well.

It is, however, in the stage of secondary fever that the cerebral disturbances appear most threatening and the danger to the patient is the greatest. In the first stage of the disease—that is, before the appearance of the eruption—the disturbances are all of a sthenic character and more easily treated. In the stage of secondary fever there are two forms that manifest themselves, and they must be clearly distinguished one from the other—the sthenic and the asthenic.

All cerebral complications prevent the development of the eruption. In the first stage the eruption will not make its appearance, and in the second stage the natural development will be arrested, the vesicle will remain vesicle, and there will be no formation of pus.

In the epidemic of small-pox that occurred in the winter of '70-71 I had occasion to observe numerous cases, both in my own practice and in that of others, and I am inclined to believe that some cases in my practice with that form of complication may have ended fatally from lack of proper appreciation and a proper guiding line of treatment. The text books are all silent upon this subject, merely mentioning headache among the prodromic symptoms, but without any indications as to what might be the proper course of treatment should the cerebral disturbance be augmented.

Trousseau, in his clinical lectures, makes but little mention of cerebral disturbance and its treatment. In his clinical lectures, article Variola, he says: "From the facts now stated it appears that when the eruption does not come well out by the fifth, sixth, or seventh day, when the pustules are irregularly developed, when the perspiration ceases and can not be restored, and lastly, when delirium, profound coma, and twitching of the tendons continue or supervene, the worst possible prognosis must be formed. The fatal issue is impending very near." In the section on treatment, he says he is satisfied with prescribing low diet and cooling drinks; also that cold applications to the head might be beneficial. There is, however, no distinction made as to the different forms. My practical experience, however, has taught me that active interference as the case may require is demanded, and promises a great measure of success. I will present to your consideration three cases—the first of the first stage, the other two of the stage of secondary fever—that will best illustrate the object of this paper.

Case I. Delirium, cerebral congestion, before the eruption. B. R., æt. 18, a youth of excellent physical development; in good flesh. Sanitary condition of apartment excellent. Two cases of variola in the house. Sunday, February 3d, he complained of pain in his back, but as he had been in the habit of joking about it (being aware that pain in the back was one of the premonitory symptoms), he was not regarded. He laid down, however, had some books brought to him, and read.

February 4. High fever; pulse full and strong, 120; tongue coated; was ordered a mixture of spts. mindereri and potass. bromid.

February 5. Is inclined to be drowsy; was ordered a purgative. The drowsiness increased, however, until toward evening he was in almost a semi-comatose condition; had to be called several times ere he would respond, and then did so in a wandering manner, or would merely look up with a vacant stare; recognized no one and lay in one position. Cloths wrung out of a hot infusion of mustard (so strong that the hands of the attendant were fairly inflamed from it) were applied to the feet and legs as high as the knees. The cloths were renewed every twenty minutes or half hour. After continuing the application for about two and a half hours he became more lively, and soon thereafter fell into a sound and healthy slumber. The next morning was perfectly conscious and comfortable. The eruption appeared. He made an excellent recovery.

Case II. Delirium; asthenic form; stage of secondary fever. A. R., æt. 11, a boy of ordinary physical development, previously in good health. Variola eruption out five days. On examination found the eruption developing naturally on the body, not so well in the face (probably due to the fact that the body was well covered by blankets, and the face uncovered, the house being a very cold one, time January). Pulse 90, inclined to be feeble. Mind wanders somewhat when he lays quiet, but answers quickly and correctly when called.

Three days later I saw him again with his attending physician. Pulse 110, very feeble; pupils somewhat contracted, but sensitive to light; muttering delirium; does not answer when called; some subsultus tendinum; picks at bedclothes; throws himself about the bed; passes his urine in bed; refuses to take any food, has not taken anything in the last twenty-four hours; insomnia; no sleep for twenty-four hours; sordes on teeth; tongue dry; arrest of development of the eruption. He was ordered muriated tincture of iron and quinine. To have about half a bottle of Rhine wine, mixed with an equal quantity of milk, in the next twenty-four hours [this mixture is pleasanter than wine-whey, more nourishing, and more easily made]; also about two cupsful of beef essence. This treatment was pursued, the symptoms improved rapidly, and the boy made an excellent recovery.

Case III. Delirium; coma; stage of secondary fever; sthenic form. Wm. H., æt. 29, man of short stature but of excellent physical development; short neck and plethoric habit. Beer-driver by occupation. Previously in good health. Eruption out seven days. On examination found him as follows: pulse full and strong, 130; pupils contracted and insensible to light; lies in a perfectly unconscious condition [had previously been very violent, kicking and striking every one who came near him, not recognizing anybody]; eruption in the vesicular stage with no tendency to pustulation. This was at 11 A. M. Ordered.

R Quin. sulph

Extr. hyoscyami, aa gr. i.

M. Every two hours.

And cloths wrung out of a hot infusion of mustard, to be applied to the legs.

Saw him again at 5 P. M. with his attending physician. There was no improvement. I advised six leeches to the forehead and

temples, and the bites allowed to bleed freely for some time after.

10 P. M. decidedly better, recognized his attending physician, who is an old friend. Ordered an active cathartic.

Second day, 10 A. M. In statu quo.

4 P. M. Is again totally unconscious; has been since 2 P. M. Pulse full; pupils contracted and insensible to light. I now advised nine leeches to be applied to the forehead, temples, and mastoid processes, and the bites to be afterward stimulated with warm water.

Third day, 10 A. M. Patient perfectly conscious, recognizing all his friends; spoke cheerfully and asked for a beefsteak. From this time on without any untoward circumstances the patient made an excellent recovery.

I will mention here *en passant* that the eruption in the face was aborted. Over the rest of the body it developed naturally.‡

I had nowhere previously seen a similar plan of treatment adopted, and it was only reasoning by analogy that induced me to have recourse to leeches. In this case it was evident that unless the brain was relieved, the issue would be fatal. It was as a *dernier resort* that leeching was resorted to.

It is not a trifling matter to apply leeches in small-pox when the authorities tell us that the fibrin, and thereby the coagulability of the blood, is more or less impaired.—*The Clinic*

The St. Nicholas, as a magazine for little people, is without a rival. The publishers, Messrs. Scribner & Co., are doing a good work in furnishing the children with choice reading suited to their tastes and years, and free from the sensational and demoralizing stuff too frequently found in books and periodicals published for juveniles. Subscription price, \$3 per annum.

The Sanitarian, edited by Dr. Bell, of New York, devoted especially to subjects pertaining to State medicine, is creditably filling an important niche in medical literature. No subject deserves more consideration at the hands of physicians, than preventive medicine.

Scribner's Monthly is one of the very best magazines for the family that has ever been published, and is justly one of the most popular. Subscription price, \$4 per annum.

Editorial.

Sundries, a-hem!—In our criticism of the annual report of the board of trustees of the Cincinnati Hospital, in our last issue, we referred to the statement that the sum of \$5,760.10 had been paid to H. M. Jones, the superintendent, for sundries. In that we meant no inference that any part of that amount of money had been appropriated in any other way than as the board of trustees had directed; but according to our way of thinking, the item of sundries for so large an amount has no business in that report, as under that head may be classed expenses of committees traveling to visit other institutions, banquets to roving bands of city officials of this and other places, fishing tackle for the amusement of patients that are able to sit on the banks of the beautiful canal that meanders conveniently near the hospital, or row-boats for use of those who have become permanently convalescent, or other equally important, but necessary expenses that pertain to a liberal management of a first-class city hospital. In short, we want to see reports from that institution in which things are called by their right names, with tables that balance, and that do not require a personal explanation from some one connected with the hospital.

Occasionally we have thought it profitable to jot down, for the delectation and benefit of our readers, some of the ways that are sometimes adopted by disciples of Hypocrates and Galen to obtain a lucrative business. In that connection we recently had our attention called to one of the ways of Dr. B., which certainly showed evidence of both originality and enterprise. Being beloved by his neighbors, he was, by reason of his many accomplishments, elected a member of the board of education, where his eminent talents causing him to stand intellectually head and shoulders above his fellows, he was by them asked to step up higher, and take a place as school examiner. Just at this point light began to glimmer among the cells composing the gray matter of at least one side of the doctor's brain, the scintillations of genius began to sparkle, and a resolution to this effect was evolved: "Resolved, that the examination of teachers in English literature be from and after the passage of this

resolution abolished, and examinations in zoology and anatomy substituted in its place." Of course, the teachers would all be accomplished in English literature and an examination was superfluous, and here was an opportunity to obtain teachers qualified with a higher education. A resolution so important as this, when presented to the board of examiners by so eminent an authority as the doctor, needed no argument from him to cause its instantaneous adoption. The fire of genius now illuminated the whole of the doctor's cerebrum. A discovery was made that very few, if any, of the teachers were qualified to pass an examination on the subjects of zoology and anatomy. The doctor had been assigned as examiner on those subjects, and who so well qualified to give the teachers the necessary instruction. Did he not know from his earliest infancy that a jackass was superior to a lion? The doctor's gray matter worked; another resolution was evolved, proposed to himself while in committee of the whole, and passed unanimously. He would open a school for the instruction of students of zoology and anatomy. A paper was prepared setting forth the superior advantages of the doctor's school, the laboratory, dissecting-room, and menagerie all under one roof; pupils made masters of the subjects taught in the space of six weeks, and all for the low price of \$—— per term. This paper, with another of large dimensions for the signatures of those who wished to become pupils in this school of science, was confided to a man Friday for circulation among the teachers, with a gentle admonition that if their autographs were duly enrolled as pupils in the doctor's school with the necessary greenback accompaniment, it would be well with them on the days of their examination. Sad to relate, there was soon after a miscarriage; the doctor's school was not opened, and all of the doctor's famous facilities are locked up and kept out of the reach of every inquiring pedagogue whose spirit hankers after a higher education, and whose visions of immortal renown lead them to the door of the doctor.

"For of all sad words of tongue or pen,
The saddest are these: 'It might have been!'"

During the past year we have been so frequently crowded for space, that we have determined to obtain relief by enlarging the size of LANCET AND OBSERVER to ninety-six pages of reading-matter each month, making at the end of the year a volume of 1152 pages. In

order to partially meet the expense of the additional 384 pages, we are obliged to increase the subscription rate to \$3.50 per annum.

In publishing so large a journal at this low price, we are constrained to call on the friends of the *LANCET AND OBSERVER* to make an effort to increase our subscription list. You want the largest possible amount of good reading-matter at the very lowest price, and it will afford us a corresponding amount of pleasure to gratify your desire in that direction, and that result can only be obtained by a journal with a large circulation. We are perfectly well aware of the fact that times are dull, and money hard to collect after services are rendered, and in order to meet the exigencies of the case, we make the following liberal proposition, which we believe will give you the cheapest medical journal published in this country: The *LANCET AND OBSERVER* will be sent to one old subscriber and one new for one year, for \$6; additional new subscriptions sent by the same person at the same rate.

By practically helping the journal, you will help yourselves, and just in proportion as our circulation is increased, will the journal increase in value.

Take the first opportunity that presents to call the attention of your professional neighbors and friends to the above statements, and send us the names of those who ought to be subscribers, but are not.

At a convention of the physicians of Oldham and adjoining counties, held at La Grange, Kentucky, August 17, 1875, Dr. J. Baker was elected president, and Dr. D. Johnston secretary.

On motion, Drs. R. F. Logan, J. Y. Newkirk, S. C. Yager, N. B. Wells, and R. C. Prewitt were appointed a committee to report resolutions for the action of this convention.

The committee made the following report, which was adopted, and the secretary directed to have the same published in the medical journals and public prints circulating in the counties represented in this convention:

1. *Resolved*, By the physicians of Oldham and adjoining counties, that we will, in future, be more diligent in the collection of our fees, and we believe we should inform our patrons, by letter or otherwise, at least once in six months, the amount of our claims against them.

2. *Resolved*, That all medical fees are due when the services are rendered, and that each physician should present his bill for collection as soon as he thinks his interests may require.

3. *Resolved*, That the custom of giving medical services to ministers and their families free of charge be dispensed with, and that hereafter they be charged as other persons, according to circumstances.

4. *Resolved*, That the members of the profession are under no obligations to render their services to those persons who are able, and yet habitually refuse or neglect to pay their medical accounts; and that physicians should decline to attend such persons, except for cash or its equivalent.

5. *Resolved*, That persons who are unable, from unavoidable circumstances, to pay physicians, are objects of charity to the whole community, and that the county courts should allow physicians a reasonable compensation for services rendered such persons.

J. BAKER, M.D., *Shelbyville, Ky., President.*

D. JOHNSTON, M.D., *Westport, Ky., Secretary.*

The article on "Is alcohol food," published in this number of the LANCET AND OBSERVER, should be credited to J. N. Robinson, M.D., of Medina, Ohio.

EDITOR LANCET AND OBSERVER:—Will you please announce through your columns, that anybody wishing a number of the LANCET AND OBSERVER from 1858 to 1871, can procure the same by addressing J. A. Averdick, M.D., Covington, Ky.?

Reviews and Notices.

Transactions of the Medical Association of the State of Alabama, Twenty-eighth Session. Held at Montgomery, April, 13, 14, and 15, 1875.

These Transactions constitute a respectable volume of 359 pages. The medical profession of Alabama is evidently well organized and constituted of live men. An act of the legislature constitutes the State Medical Society, the State Board of Health, which not only gives the society official recognition, but official power—a condition of affairs that we believe is unknown in any other State. Consequently, the president's address was on the subject of State medicine, and especially preventable diseases. The report of the committee of censors is so complete and of so much general interest, that we feel that no apology is necessary for presenting a long

abstract, which shows the legislative workings of the association :

“After careful consideration of the whole subject we are of the opinion that the association should accept the provisions of the bill in the form in which it passed the general assembly.

“A copy of the bill in this form is here subjoined :

“AN ACT TO ESTABLISH BOARDS OF HEALTH IN THE STATE OF ALABAMA.

“SEC. 1. *Be it enacted by the General Assembly of the State of Alabama*, That the Medical Association of the State of Alabama, organized in accordance with the provisions of the constitution, which was adopted by said association at its annual meeting, in the city of Tuscaloosa, in March, 1873, be and is hereby constituted the Board of Health of the State of Alabama

“SEC. 2. *Be it further enacted*, That the board of health of the State of Alabama, thus established, shall take cognizance of the interests of health and life among the people of the State; shall investigate the causes and means of prevention of endemic and of epidemic diseases; shall investigate the influences of localities and employments upon the public health; shall from time to time make to the general assembly such suggestions as to legislative action as in their judgment may seem advisable; and shall be, in all ways, the medical advisers of the State.

“SEC. 3. *Be it further enacted*, That such board of health of Alabama shall make to the governor for transmission to the general assembly an annual report of their investigations and transactions; of which annual report there shall be annually published, as other reports transmitted through the governor to the general assembly, a sufficient number of copies for distribution among the members of the general assembly, and the members of the board of health of the State of Alabama, and such additional numbers as may be deemed advisable for the purpose of exchanging for the reports of similar associations in other States.

“SEC. 4. *Be it further enacted*, That the county medical societies in affiliation with the medical association of the State of Alabama, and organized in accordance with the provisions of the constitution of the said association, as described in the first section of this act, be and are hereby constituted boards of health for their respective counties; and, as such, shall be under the general direction of the board of health of the State of Alabama, created by the first section of this act.

“‘SEC. 5. *Be it further enacted*, That the county boards of health, thus established, shall have only advisory powers, and shall be conducted without expense to the State or to their respective counties, except under the conditions provided for under the sixth section of this act, which here follows.

“‘SEC. 6. *Be it further enacted*, That the competent legal authorities of any county in this State, or of any incorporated town or city of any such county, shall, whenever in their judgment it becomes expedient to do so, proceed to invest the board of health of the county, with such executive powers and duties for the promotion of the public health, and under such rules and stipulations as shall be agreed upon between the two parties.

“‘SEC. 7. *Be it further enacted*, That in any such agreement, as is contemplated in section six of this act, the right to elect or appoint the officers and servants employed in the administration of the sanitary regulations so agreed upon shall, in all cases, be reserved to the board of health; and further, that all questions relating to salaries, appropriations, and expenditures shall be reserved to the legal authorities of the county, town, or city, as the case may be.

“‘SEC. 8. *Be it further enacted*, That no board of health, or advisory, or executive medical body of any name or kind for the exercise of public health functions, shall be established by authority of law in any county, town, or city of this State, except such as are contemplated by the provisions of this act, the object of this prohibition being to secure a uniform system of sanitary supervision throughout the State. But nothing in this article shall be so construed as to prevent any of the boards of health created by section four of this act from accepting and executing any special powers that may be granted them by the general assembly of the State; provided, that this act may be changed, modified, or repealed at any time, at the pleasure of the general assembly of this State.

“‘Approved February 19, 1875.’

“‘STATE OF ALABAMA, OFFICE OF SECRETARY OF STATE.

“‘I, R. K. Boyd, secretary of state of the State of Alabama, do hereby certify that the foregoing act entitled “An act to establish boards of health in the State of Alabama,” approved February 19, 1875, is a true and correct copy of the original now on file in this office.

“‘Given under my hand and the great seal of the State, affixed at Montgomery, this 15th day of April, A. D. one thousand eight

hundred and seventy-five, and of the independence of the United States of America the ninety-ninth year.

(Signed.)

“R. K. BOYD, [L. S.] .

“*Secretary of State.*”

“In order to facilitate the action of the association in reference to this matter we have prepared the following resolutions, and respectfully recommend their adoption :

“*Resolved*, That the medical association of the State of Alabama hereby accept for themselves and for the county medical societies under their jurisdiction the provisions of an act entitled an act to establish boards of health in the State of Alabama, and approved by the governor on the 19th day of February, A. D. 1875 ; and will endeavor to discharge the duties assigned to them in said act in good and with earnest purpose to be of service to the people of Alabama.

“*Resolved further*, That a copy of these resolutions, properly certified by the president and the secretary of the association, be transmitted to the governor of the State.’

“If the association, in accordance with our recommendation, should accept the terms of agreement authorized by the State, then at once several questions of practical importance present themselves for solution.

“We must decide, for example, whether we ought to expect the State to defray the expenses of publishing the transactions of our present session ; and whether the transactions of our present session should be designated in its subordinate title as the report of the State board of health.

“We are unhesitatingly of the opinion that both of these questions must be answered in the negative—that the association does not, in fact, become the State board of health until it has made formal acceptance of the terms of agreement and notified the State accordingly.

“Still further, if we accept the terms and undertake to discharge the functions of the board of health of the State, we must proceed to what specific duties the discharge of these functions devolves upon us, and what special action is necessary for their execution. In other words, we must decide what we are to do, and how we are to do it.

“The duties of boards of health may be either advisory, or executive, or both. The duties of this association, in its character of State board of health, are of necessity, for the present, chiefly of

an advisory kind. They will become executive also in due time—namely, when an increasing population shall demand, and increasing prosperity shall warrant the State to attempt more energetic supervision of the public health than is now possible. In the meantime, we must proceed wisely and prudently. Even the members of the medical profession have as yet a very inadequate appreciation of the ends and aims, and especially of the actual resources of sanitary science. Not much knowledge, then, of this sort is to be expected of members of the general assembly and of the general public. Hence it results that wise sanitary legislation is difficult to obtain, and that appropriations for sanitary purposes are made for the most part with hesitation and reluctance; so that a municipal corporation which will expend, without hesitation, many thousands of dollars for the protection of the homes of the people against the ravages of fire, can hardly be induced to expend as many hundreds for the protection of the lives of the people against the ravages of disease. All these things must be remembered, and we must not expect too much in the way of public appreciation and encouragement. Contrariwise we must possess our souls in patience, doing what good we can, and striving in the meantime to educate our people to some adequate appreciation of the value of sanitary science to the welfare of communities and States.

“Inasmuch as we have no salaried officers, and no financial resources, we are obliged to refrain for the present from every sort of work that has to be directly paid for. Nevertheless there is work enough for us to do, and work, too, of very great importance.

“First of all we must arrange our plans of procedure, and determine the organs, the special machinery, through which our health functions can be discharged with the best prospect of facility and efficiency of action. To this end we respectfully recommend the adoption of the following ordinance, namely:

“ ‘ORDINANCE IN RELATION TO THE COMMITTEE OF PUBLIC HEALTH.

“ ‘1. *Be it ordained by the Medical Association of the State of Alabama*, That the five censors of the association, together with five other members, to be elected from the house of counselors, under the same regulations as to method of election, terms of office, *et cætera*, as are prescribed in articles 24, 25, and 26 of the constitution, for the election of censors, be and are hereby constituted a Committee of Public Health.

“2. *Be it further ordained*, That the Committee of Public Health shall be the supervisory and immediately responsible agents of the association in the discharge of its functions as Board of Health of the State.

“3. *Be it further ordained*, That the Committee of Public Health shall act as a general committee of reference in all matters relating to the sanitary interests of the State, and this both during the sessions and during the intervals between the sessions of the association.

“4. *Be it further ordained*, That the Committee of Public Health shall prepare for the consideration of the association such plans and suggestions as from time to time may seem to them expedient and proper.’

“In relation to the county societies which, in their capacity of boards of health, have been placed by the act of the general assembly which we are now discussing under the general direction and control of this association, we appreciate very thoroughly the fact, that over large portions of the State, circumstances will not warrant the expectation from them of any considerable amount of sanitary work. Still they ought to be able to do something. They ought, for example, to be able to prepare accurate accounts of their endemic and epidemic diseases. They ought to be able to prepare descriptions and charts of the geological and topographical formations, and the climatological characteristics of their respective counties; and to indicate the relations between these several classes of conditions and the public health. They ought also to be able, even in the absence of any registration law, to furnish approximately complete statements of the vital and mortuary statistics of their several counties, and these could not fail to be of considerable value. All judicious action must be based on accurate knowledge, and the reports here indicated, would furnish to this association the information needed, for the intelligent administration of the trusts which have been confided to its keeping by the law-makers of the State.

“The county societies, therefore, should complete their sanitary organization, and hold themselves in readiness to take advantage of such opportunities to be of public service, as may from time to time present themselves.

“What special form of sanitary machinery the several county societies shall adopt is left largely to their own discretion, provided only that it shall be in harmony with the health-law of the State,

and with the plan of organization of this association, and of course must be governed to some extent by the special circumstances of every special case. But inasmuch as uniformity in these arrangements is very much to be desired; and inasmuch, further, as the multiplication of offices in small societies is attended with many evident disadvantages, we venture to recommend that the boards of censors of the several county societies be made the agents of these societies for the discharge of their health functions.

“ MEDICAL LEGISLATION.

“ On the important subject of medical legislation we have some suggestions to make for the consideration of the association. As the board of health of the State, it will be the duty of this association to recommend to the general assembly, from time to time, the enactment of such laws as may seem to be required for the advancement of the sanitary interests of the State; and as the organic representative of the medical profession, we conceive that it is also the province of this association to recommend to the general assembly the enactment of such laws as may be required for the regulation of the practice of medicine in the State. It seems to us, indeed, that no laws affecting the interests of the medical profession in any way, should be allowed to go before the general assembly without first having received the indorsement of the association.

“ Bills of the character here referred to are not infrequently pressed upon the consideration of the general assembly, and this, too, upon the suggestion of medical men. But a few medical men without organization or concert of action with the profession at large, ought not to presume to influence legislation which is to affect the whole profession. It happens, too, unfortunately, that the legislation thus sought is not always free from serious objection. Take in illustration a single example: There was a proposition before the general assembly during its last session to relieve physicians from the payment of the State license tax. Now we are of the opinion that it is very bad policy to be annoying the law-makers of the State with applications for such small favors as this. We are not willing that medical men shall condescend to be beggars. The spirit of the mendicant is little in harmony with the dignity and with the glorious traditions of our profession; and this clamoring for small favors can not fail to degrade us in the estimation of thinking men. But not only do we believe it to be bad policy to beg the State for small favors. We go still further and take still

higher ground. We ought to make it an inflexible rule *never to seek to influence the enactment of laws that are for our own exclusive benefit*. Let us ask nothing of the general assembly which is not quite as much for the advantage of the general public as of the profession of medicine.

“Of this character is the plan of a law to be entitled ‘An act to regulate the practice of medicine in the State of Alabama,’ which we placed before the association at our session in Selma last year. We present this bill again to the association with some changes in the fourth section, and bespeak for it the most careful and deliberate consideration. The time has not yet come when it is expedient to memorialize the general assembly to enact it into a law, and we therefore recommend that no definite action be taken in regard to it during the present session. In its improved form it reads as follows:

“‘AN ACT TO REGULATE THE PRACTICE OF MEDICINE IN THE STATE OF ALABAMA.

“‘SEC. 1. *Be it enacted by the General Assembly of the State of Alabama*, That no person shall be permitted to practice medicine, in any of its branches or departments, as a profession and means of livelihood, in this State, without having obtained a diploma or certificate of qualification from some authorized board of medical examiners as hereinafter provided.

“‘SEC. 2. *Be it further enacted*, That the board of censors of the medical association of the State of Alabama, organized according to the constitution of the said medical association of the State of Alabama, which was adopted at its annual meeting in the city of Tuscaloosa, in March, 1873; and the boards of censors of the several county medical societies, which are in affiliation with the said medical association of the State of Alabama, and organized in accordance with the provisions of the constitution just mentioned; and the faculties of all regular medical colleges holding charters from the General Assembly of the State of Alabama and recognized as of good standing by the said medical association of the State of Alabama, be and are hereby constituted the authorized boards of medical examiners referred to in the first section of this act.

“‘SEC. 3. *Be it further enacted*, That the standard of qualifications required of persons desiring to practice medicine in this State, together with the rules for the government of the authorized boards of medical examiners, shall be such as may be determined from

time to time by the said medical association of the State of Alabama in accordance with the provisions of its said constitution of 1873.

“SEC. 4. *Be it further enacted*, That every diploma or certificate of qualification, authorizing any person to practice medicine in this State, which shall be issued by any authorized board of medical examiners, shall be presented to the probate judge of the county in which said person resides, who shall officially indorse the same, and seal it with the seal of the county, and who shall also cause a full and fair copy of the same to be made in a well-bound book to be kept for that purpose, and called the Register of Licensed Practitioners of Medicine, and for this service he shall be entitled to a fee of one dollar.

“SEC. 5. *Be it further enacted*, That if any person holding a diploma or certificate to practice medicine from any authorized board of medical examiners in this State, shall be charged in regular form with any grossly immoral, ungentlemanly, or unprofessional conduct, he shall be summoned before said board of medical examiners, or before such other authorized board of medical examiners as may be able most conveniently to exercise jurisdiction in the case, to answer to said charge; and if, after fair trial, and with the right of appeal, according to the provisions of section sixteen of the constitution of the medical association of the State, he shall be adjudged to be guilty as charged, then his diploma or certificate shall be revoked; and of this revocation the judge of probate of the county in which said diploma or certificate may have been recorded, shall be officially notified by the board of medical examiners before whom the case was tried, and he shall indorse said revocation across the face of the record of the diploma or certificate in the Register of Licensed Practitioners of Medicine kept in his office; and after this, said person shall be debarred from the further practice of medicine in this State, and shall become liable to all the penalties of this act as hereinafter provided.

“SEC. 6. *Be it further enacted*, That any person practicing medicine in this State in violation of any of the provisions of this act, shall be guilty of a misdemeanor, and upon conviction thereof before any court having competent jurisdiction, shall be fined in the sum of not less than fifty (\$50) dollars nor more than five hundred (\$500) dollars for every such offense—one-half of said fine to be paid to the prosecutor and the other half to the county treasury; and if the fine so imposed be not immediately paid, said person

shall be imprisoned in the county jail for not less than one month nor more than one year for every such offense.

“‘SEC. 7. *Be it further enacted*, That all persons who shall be actually engaged in the practice of medicine in any county of this State, before the organization of the board of medical examiners in said county, and who hold the diploma of doctor of medicine from any regular medical college, shall be entitled to the certificate of the board of medical examiners, and to be inscribed in the Register of Licensed Practitioners of Medicine without examination as to qualification.

“‘SEC. 8. *Be it further enacted*, That all persons who shall be actually engaged in the practice of medicine in any county of this said State, before the organization of the board of examiners in county, and who practice any irregular system of medicine so as not to be recognized by the board of medical examiners as regular physicians, shall be licensed and registered by the probate judge, in such manner and form as he may himself elect; and all such irregular practitioners so licensed and registered by the probate judge of any county, shall be exempt from any and all of the penalties provided in section five of this act.

“‘SEC. 9. *Be it further enacted*, That none of the provisions of this act shall apply to persons practicing homeopathy; provided, that such persons are graduates of regular medical colleges, or of homeopathic medical colleges.

“‘SEC. 10. *Be it further enacted*, That the provisions of this act shall take effect, in any county of this State, whenever the board of medical examiners for said county shall have been organized, as hereinbefore provided, and the fact of such organization officially communicated to the probate judge of said county, by the board of censors of the medical association of the State.

“‘SEC. 11. *Be it further enacted*, That all laws and parts of laws in conflict with the provisions of this act, be and the same are hereby repealed.

“MEDICAL EDUCATION.

“Another matter of great importance, to which we feel compelled to allude, is the subject of medical education. We have too many doctors, and the standard of qualifications for graduation in our multitudinous medical colleges is deplorably, we might almost say shamefully, low. We all know that the profession is crowded with incompetent men, and that other incompetent men are continually gaining admission to its ranks. We all agree that this ought not

to be so; that it is an evil that is constantly increasing; and that something ought to be done to put a stop to it. But up to this time the question, 'How shall it be stopped?' has received no practical solution. But are we, therefore, to lose heart and hope, and fold our hands with the apathy which is born of despair? Nay, verily—a thousand and a thousand times, No! The evil has grown out of the fact that the profession, instead of guarding the doors of admission into their ranks with jealous scrutiny for themselves, have left the examination of students and the conferring of the degree of doctor of medicine entirely in the hands of the faculties of the medical colleges. But this evil, colossal as it has grown to be, will be utterly destroyed whenever the profession in good faith make the simple resolution, and act up to it, that they will no longer recognize the diplomas of colleges, but will determine for themselves to whom and upon what terms they will accord professional recognition and fellowship. This is too large a question to be argued here. What we desire to say is simply that we believe that the evil mentioned can be very materially diminished by the application of very simple measures, provided that the application of these measures is faithfully made. We would have the evil assaulted where it is the most vulnerable, namely, in its cradle—in its very origin. If nobody was allowed to commence the study of medicine except such persons as have good natural ability and a decent preliminary education, it is easy to see that the number of doctors annually graduated in this country would be very greatly diminished, and would be diminished by the excision of that class of doctors which it is most desirable to get rid of—namely, the class of ignoramuses and incompetents.

"We therefore recommend very earnestly, that the county medical societies be advised to put at once into practical operation that article of the constitution (the 71st) which makes it the duty of the boards of censors of the county societies to examine all persons proposing to begin the study of medicine in their respective counties, and which further enjoins that no practitioner of medicine shall receive as a student any one who does not hold a certificate of having passed this preliminary examination favorably."

The papers read before the association are notable for the care, learning, and investigation bestowed in their preparation.

Reviews crowded out of this number: *Clinical Lectures and Essays*, by Sir James Paget; *Transactions of the Ninth Annual Meeting of the Missouri State Medical Association*; *Eighth Annual Report of the Board of Health of the City of Cincinnati*; *Paralysis from Brain Disease in its Common Forms*, by H. Charlton Bastian, M.D.

THE CINCINNATI

LANCET AND OBSERVER.

J. C. CULBERTSON, M.D., Editor.
T. M. STEVENS, M.D., Asst. Editor.

VOL. XVIII.—NOVEMBER, 1875—No. 11.

Original Communications.

Art. 1.—Early History of Practical Anatomy.

An Introductory Lecture delivered by WM. CLENDENIN, M.D., Professor of Anatomy in the Miami Medical College of Cincinnati, October 1, 1875.

In our text-books on anatomy of the present day we find that the names of persons are, in many instances, given to certain parts of the body. In view of which fact I have thought it might be advantageous to you, young gentlemen, at the beginning of our course, to take a brief survey of the early history of anatomy, so that you may know who these persons were and what they did as laborers in the field of science to entitle them to the distinction thus given to them.

The early history of medicine consists largely of uncertain traditions, often mingled with fables; yet the oft-quoted statement of Pliny is undoubtedly correct: That if there exists any nation, which, at any epoch of its history, was without physicians, there is not one in which we do not find some vestiges of medicine. To be sure the Romans, who occupied themselves with killing, were satisfied to remain five hundred years without a regular physician.

The Egyptian nation was, in medicine, as she was in other sciences, the instructress of the human race. Houdart gives special prominence to the fact that Egypt was the cradle of medicine, and in summing up his testimony of the immense knowledge of the savans of ancient Egypt, he indicates the titles of forty-two volumes of their writings, "six of which treated of medicine." We certainly know that at the time of the death of the patriarch Jacob, seventeen hundred years before Christ, Egypt had her practicing physicians. We read in the book of Genesis that when Jacob died, "Joseph commanded his servants, the *physicians*, to embalm him; and the physicians embalmed Israel, and forty days were fulfilled for him, for so are fulfilled the days of those that are embalmed." Some have supposed that the practice of embalming, which was practiced at a very early day, served to familiarize the Egyptian priests of that period with the anatomy of the human body; but, according to Herodotus and other historians, this process was conducted in such a rude manner that it could not have contributed to the advancement of science.

Hippocrates—born four hundred and sixty years before Christ—a contemporary of Socrates, of the famous age of Pericles, is familiarly spoken of as the "Father of Medicine." While the writings of Hippocrates, form the most ancient authentic monument in medical science, exhibit no traces of anatomical or physiological knowledge, yet he speaks of "the glands, as spongy viscera, destined to secrete humidity from the surrounding parts, and that the brain, the largest of the glands, attracts the vapors of all the interior of the body. The muscles were for the purpose of covering the bones; the nerves, the tendons, the ligaments, the membranes, are all represented as analogous organs, concurring in the same manner to the production of motion." His writings treat, in general terms, only of the form, volume, and position of the principal organs. He dissected only the bodies of the inferior animals. Some writers, indeed, deny that he even dissected animals, or that he ever had in his possession a human skeleton. So that we may conclude with the learned and candid Le Clerk, that the knowledge which Hippocrates possessed of anatomy was little, if at all, superior to that of his contemporaries.

It is to the munificence of the Ptolemies, who, about three hundred and twenty years before the Christian era, laid the foundation of the celebrated Alexandrian library and of the school of philosophy, which is graced with so many illustrious names, that we must

ascribe a new era in the history of medicine. Ptolemy Soter, and his son and successor, Ptolemy Philadelphus, brought to Alexandria the most learned men of their times, gave them apartments in the museum, and created a revenue for their maintenance. The science of medicine was cultivated in this school with peculiar assiduity, and we owe some very essential improvements to its professors. Among the most famous of these were Erasistratus and Herophilus. History furnishes but little relating to the personal of these two individuals; but through Galen, Coelius, and Aurelianus we have a full account of their opinions and practice. They are particularly mentioned as being the first who dissected the human body. The school of medicine thus established at Alexandria eclipsed all its predecessors, and for several centuries it had no rival. In the time of Galen—two hundred years after Christ—so famous was it that it sufficed to have studied in Alexandria, or even to have resided there for a time, to obtain the reputation of a physician.

The success with which the healing art was taught at the Alexandrian school was chiefly due to the fact that its founders authorized the dissection of the human subject.

As I have already stated, Erasistratus and Herophilus were the first to take advantage of the unique authority thus granted—they were the first human anatomists of which we have any knowledge; and they amply profited by the advantage which was thus given them. They advanced our knowledge of the structure of the body, especially by pointing out the difference between the organs of the human body and those of the animals most nearly resembling it. Nearly every part of the great system of which the body is composed profited by their labors. The fame of these two anatomists is so intimately blended that it is perhaps impossible to assign to each his respective share of merit; but Herophilus was considered the most skillful in the practical department.

The practice of dissections did not long continue even in the city where it had its origin; yet the school of Alexandria produced a succession of learned men, in medicine, and also in the other sciences. During the period covering the rise of the Alexandrian school, the Romans gave their attention almost exclusively to warlike affairs, so that science of all kinds, including medicine, was almost totally neglected; yet it was during this same period that she laid the foundation for her future greatness—she extended her empire beyond Italy to Egypt. Julius Cæsar burned the great

Alexandrian library, a loss which Cleopatra sought in vain to repair through her spouse, Mark Anthony. But Roman domination was the scourge which proved destructive to the progress of medical science in Egypt. "That royal people, who delighted to see blood flow, not only on the battle-field, but also in their diversions and daily exhibitions, regarded as a profanation the contact of a corpse."

About the year 200 of the Christian era, we find in Rome one of those extraordinary characters who are destined to form an era in the history of science, both from the actual improvement which they have introduced into it, and from the ascendancy which their genius enabled them to acquire over the minds of their contemporaries. That man was Claudius Galen. Galen was a native of the city of Pergamos, in Asia Minor, where there was a celebrated temple dedicated to Æsculapius. Galen enjoyed, both from birth and from education, every natural and acquired advantage. He made several voyages for instruction, and spent considerable time in Alexandria. His writings were very voluminous, amounting in all to about two hundred distinct treatises. He wrote a monograph on the human skeleton, in which he recommends that the bones be not studied in books only, but that they be seen and handled; and to do that, he advises the student to go to Alexandria, where he can see the human skeleton.

Galen undoubtedly had a knowledge of the bones composing the skeleton; and he was perhaps the first anatomist to teach the mechanism of locomotion, and to prove that the muscles take an active part in it. He says that the muscles are so numerous that they can not be easily counted, and that they unite in such a manner that several seem to form but one, and when they divide, there appears to be as many as there are tendons.

Galen's knowledge of anatomy was perhaps entirely limited to that derived from dissecting the ape and lower animals; yet he refuted the opinion that the arteries contained air, and not blood, and it must be admitted that in many respects, his works possess great merit.

But the zeal for the dissection of the human subject was speedily dissipated. The Romans burned their dead, and the Koran of Mohammed prohibited even the touch of the corpse.

Rhazes, one of the most illustrious physicians of the Arabian school, who was born seven hundred years after Galen's time, paid

no attention whatever to anatomy. The same may be said of Avicenna, Ali Abbas, Meuse, and others of the Arabian school.

In the Saracenic school of Spain, which extended from the eighth to the twelfth century, the science of medicine seemed to retrograde, and practical anatomy was unheard of. From the twelfth to the fifteenth century, an interval of three hundred years, during which what are termed the dark ages still remain enveloped in the deepest gloom, every department of science was neglected, and among others that of medicine fell into the lowest state of degradation. The healing art, such as it was at that time, was in the hands of the monks, who still adhered to the doctrines of Galen, but with these they mixed up a large portion of superstition, and had not unfrequent recourse to magic and astrology.

Even as late as the fourteenth century, it was the custom to demonstrate anatomy on hogs and other animals, the organs of which were supposed to most nearly resemble the human body, making up the deficiencies by supposed analogies, or rather by the efforts of the imagination.

In 1315, Mondini, a professor in the university at Bologna (in Italy), so far overcame vulgar prejudice as to have dissected two female subjects, and subsequently published a description of the human body, which appears to have had the rare merit of being drawn immediately from nature, and for a long time it was used as a text-book in many of the Italian universities. Mondini is also entitled to the credit of having given a very early, if not the first example of anatomical plates. But such was the prejudice against the dissection of the body, that for more than one hundred years afterward no one dared to repeat the acts of the Bolognese professor. Even Mondini himself was not free from the thralldom of superstition, and he was not willing to open the head for fear of committing a mortal sin.

Thus, with a very few exceptions, during a space of more than a thousand years from the death of Galen, very little advance had been made in our acquaintance with the structure of the body. The professors of the Arabian school, with their successors in Italy and France, for the most part contented themselves with copying the descriptions of the ancients, without ever calling in question their accuracy. Even after the examination of the human body had become more common, it was long before the profession could so far free themselves from the tyranny of authority as to admit that any imperfection could exist in the works of Galen, and the researches of

all the anatomists named were made in accordance with his teachings.

It was reserved for Andrew Vesalius to correct the errors of Galen; and this he was enabled to do successfully, because, as we have already said, Galen's descriptions were, for the most part, made from dissections of apes, and did not therefore correctly represent the conformation of the human body.

Vesalius was born in Brussels, in the year 1514, of a family long illustrious in medicine. He was the first anatomist who threw off the yoke of authority, which had been imposed by a blind veneration for the opinions of the ancients.

Renouard (*History of Medicine*) gives the following version of the story as to the way Vesalius obtained his first skeleton: "Having observed the body of a criminal, of which the birds had so perfectly cleaned away the soft parts that there remained of it only the bones and ligaments, he detached successfully the extremities; but when he attempted to carry off the trunk, he found it so strongly bound to the stake by iron chains that he was compelled to work all night to get it loose." We find our hero next in Paris, in his zeal to observe nature for himself, disputing with the dogs and vultures for the remains of criminals. In his twentieth year he discovered and demonstrated the semilunar valves of the aorta. "At the age of twenty-three, he was nominated to the chair of anatomy in the faculty at Padua, by the Senate of Venice; at twenty-nine (in 1543), he published his great work, in which this science is placed in a new light, and with a completeness which left far in the rear all that antiquity had transmitted on the subject." In the following year he was called, by the emperor Charles V., to the court of Madrid, then the most brilliant in Europe, in the character of first physician, after which he abandoned forever his anatomical studies.

Long and bitter discussion occurred between the defenders and opposers of Galen's teachings, and it was not until after many years of severe struggle that the truth was established, and that it was finally admitted that the errors which had been pointed out by Vesalius actually existed.

Anatomists everywhere followed Vesalius, among whom were some of those who had defended the teachings of Galen: Eustachius, professor of anatomy at Rome; Fallopius, a pupil of Vesalius, professor at Padua and Pisa; Columbus, a friend and pupil of Vesalius, and his successor to the chair of anatomy at Padua. And

I may mention also the names of Patricius, Gassen, Vidius, Arantius, Varolius, and others whose names are so intimately connected with the study of anatomy.

The prejudice against dissecting the human subject remained unabated, and was strengthened by papal bulls, by royal decrees. But at the period of which we are speaking, a grand political revolution was commencing in Europe, which eventually produced an entire change in the civil condition of its inhabitants, and indirectly affected, in an equal degree, its science and its literature. The effects of the crusades of the Reformation, and of the invention of printing, "an art which derides the havoc of time and barbarism," was to give a new impulse to learning and the arts, and particularly to medicine. Public dissections were made in the universities of Italy. Bologna, which had been the first, continued to be one of the most celebrated schools of anatomy, and her fame was heightened by the names of Vesalius, Malpighi, Valsalva, Varolius, and others of equal distinction, and, in connection with one of the great social questions of the day, it may be of interest to you to know that this list of savans was graced by a woman—Madonna Manzolina—who was among the most distinguished professors of anatomy at Bologna.

The influence of the great men just named was felt and acknowledged by the more intelligent everywhere, and even by the Roman pontiff, and kings. Up to this period, dissections were made by the teachers of anatomy only, and this was done in some private chamber, but under no circumstances were students permitted to handle the scalpel or *razor* for themselves, for the latter instrument was the one in most common use. Anatomical chairs were soon afterward created; amphitheatres were erected and provided with facilities for dissections; more liberal laws were enacted, rendering dissecting material more abundant, and less difficult and less hazardous to obtain.

Under these favoring circumstances many important discoveries were made. Fabricius discovered the valves in the veins; the pulmonary circulation was explained by Columbus and Cesalpine; Michael Servetus, who was burned at the stake by Calvin, discovered how the blood was conveyed from the right to the left side of the heart, and, indeed, Cesalpine almost attained a full conception of the circulation of the blood. The nerves were entirely separated from the tendons, and some idea was had of the lymphatic system. Thus anatomy began to grow into importance, and came to be looked upon favorably by the profession at large. Among the distinguish-

ing features of this period (the sixteenth century) is to be noted the fact that in the various universities which were established in Southern Europe, anatomy and other branches of medicine began to form a very distinguished part of the teaching. First in the order of time was the University of Salerno—first after the destruction of the Roman empire; the second, that of Montpellier. The University of Bologna is said to have had some celebrity as a school of medicine as early as the thirteenth century. Subsequently, medicine was taught in the universities of Vienna, Paris, and about half a century afterward, medical schools were established in Padua, Pavia, Milan, Rome, and Naples. To these schools hundreds of students were convened from all parts of Europe.

England was the first to profit by the brilliant example of Italy. Through the efforts of Dr. Cains, the College of Surgeons was founded in 1540; and, in 1581, the College of Physicians created the lectureship on anatomy, and two years afterward built the Knight River Street Anatomical Museum, the first constructed in Great Britain. It was in this amphitheater that Harvey gave his first demonstrations of the circulation of the blood about the year 1617, but his first publication of his great discovery was not made until several years later.

But before noting the life and labors of Harvey, it may be proper to recall what were the acquisitions of his predecessors. The liver was considered, from time immemorial, as the organ of sanguification. It was supposed that the veins took their origin in the liver, and that they were the sole order of vessels that contained the blood. The arteries were supposed to contain, in their normal state, vital spirits only, of which the heart was the great reservoir. Galen modified this doctrine by demonstrating that the arteries contained blood at every period of life, but he supposed that the blood did not flow through the lungs, but that it reached the left ventricle by passing through the porosities of the septum. This opinion was not contested until the middle of the sixteenth century. At that epoch, the theologian, Michael Servetus—the same who perished, a victim of the jealousy of Calvin—dared to deny the passage of the blood through the septum of the ventricles, and contended that the blood flowed through the lungs and thence returned to the left side of the heart. Fabricius had discovered the valves in the veins. Such was the state of science at the beginning of the seventeenth century. There was only one step to take to find the true course of the blood, but that step was

difficult, as we may now readily understand. This step was taken by, and has immortalized the name of William Harvey.

Harvey was a native of Folkstive, county of Kent, England. Having studied at home, he subsequently went to Italy, and remained at Padua four years attending the lectures of Fabricius of Aquapendente. He returned to his own country with the title of doctor, in 1602, and established himself in London and became regent of the College of Medicine, in 1613; about that time he commenced to make known his doctrine of the circulation of the blood in his lectures, but he did not publish the results of his researches till 1628. I briefly give you his own story, in which he depicts the obstacles he met with in his efforts to discover the truth: "Devoting myself to discern the use and utility of the movements of the heart in animals in a great number of vivisections, I found at first the subject so full of difficulties that I thought for a long time, as Francaster, that the secret was known to God alone. I could distinguish neither in what manner the systole and diastole took place nor at what moment the dilation and constriction occurred, owing to the celerity of the movements of the heart, which, in most animals, is executed in the twinkling of an eye or like the flash of lightning. I floated, undecided, without knowing on what opinion to rest. Finally, from redoubled care and attention, by multiplying and varying my experiments, and by comparing the various results, I believed I had put my finger on the truth and commenced unraveling the labyrinth. I believed I had seized the correct idea of the movement of the heart and arteries, as well as their true use."

Renouard remarks that, "So much care and circumspection in the search for truth, so much modesty and firmness in his demonstration, so much clearness and method in the development of his ideas, should have prepossessed every one to favor the theory of Harvey; but, on the contrary, it caused a general stupefaction in the medical world, and gave rise to much opposition. This theory, which appears to us to-day so natural that we conceive with difficulty why it was not found much sooner, was nothing less than a revolution in physiology. The controversy it excited lasted over a quarter of a century, and there was not a man at the time who made any pretension to a knowledge of anatomy, who did not take an active part in it. Even the naturalists and philosophers did not remain indifferent." Harvey, however, had the satisfaction, before

his death, to see his theory of the movements of the blood universally adopted.

While we have said that England was the first to profit by the example Italy afforded, it is probably more correct to give this honor to Holland. Ruysch, Swanmerdam, Albinus, and Boerhaave were the great anatomists of Holland. Haller, the great German anatomist, studied in Holland, and it was here, too, that the Monros of Scotland commenced their anatomical course, which subsequently made them so famous in their own country. Next, in point of time, Denmark, Sweden, then Germany, France, and England, became distinguished for their schools of anatomy.

"The first Scotch anatomical museum was built (*Keen's Lectures on the Early History of Practical Anatomy*), and the first public demonstration given, in 1697. But it was not till 1720 that a regular professor was appointed. At that date Monro the first was elected professor at the extraordinary salary of fifteen pounds per annum. From this time till 1859, when Monro the third died, the history of Edinburg anatomy, and that of his astonishing family, are almost identical. True, John Bell and Knox, Charles Bell, Barclay, Innes, and others lectured in private schools; but the Monros held the scepter. All of them lived to old age—Alexander primus dying at seventy, Alexander secundus at eighty-four, Alexander tertius at eighty-six. All were professors early in life; at twenty-three, twenty-one, and twenty-five respectively. All of them taught for long periods—thirty-eight, fifty-four, and forty-eight years; and father, son, and grandson, they held the anatomical chair in Edinburg, from 1720 till 1846, a period of one hundred and twenty-six years."

Our brief sketch would be imperfect, did we fail to make one reference to the life and labors of Marie Francis Xavier Bichat, who was born November 11, 1771, and died at the early age of thirty-two. He was a pupil and adopted son of the great French surgeon, Desault. Bichat is the first anatomist, and to him belongs the credit of separating the human body into elementary tissues, and to ascertain the peculiar properties which characterize each tissue.

There is no science the study of which has always been attended with more embarrassments and difficulties than that of practical anatomy. At all times and everywhere, it has been generally regarded with popular odium; the highest degree of opprobrium has attached to the means and methods necessary for its cultivation,

especially because bad men have been employed, and employed, too, in an illicit transaction—that is, aiding to make the dead subservient to the dearest interests of the living. The men here referred to have long been known as resurrectionists, or body-snatchers. Physicians know very well that it is wholly impossible for any one, in any branch of the profession, to become a competent practitioner, unless he be fully conversant with the healthy structure of the human body. There is but one way by which this knowledge can be obtained, and that is by the dissection of the dead. The most eminent men in the medical profession everywhere, and at all times, are those who are most distinguished for their knowledge of anatomy. The immediate obstacle, and the one attended with the greatest difficulties and annoyances, has grown out of the want of material (dead bodies), or of the best means of obtaining it without doing violence to the feelings of the community.

The first and only legal source of material was executed criminals. Henry VIII. gave the College of Surgeons the privilege of dissecting four felons annually; and Queen Elizabeth granted the College of Physicians the same privilege in 1564. During the reign of George II. of England, in 1726, *all* criminals were given over to the doctors for dissection. This act continued in force till 1832, when the well-known anatomy acts were passed, making a more liberal provision for obtaining dead bodies for dissection in the medical schools.

In this country, practical anatomy was first legalized by the legislature of Massachusetts, in 1831, and soon after by New York. With these exceptions, in our own country, the dissection of the dead is still unlawful. Our legislators have almost always been on the side of the superstitious masses, and they have generally answered the petitions of the physicians by passing the most stringent laws—even the bodies of criminals who have died on the scaffold to expiate the highest crime, have been protected from the touch of physicians, as if the dissection of their bodies would be a still greater crime than that for which they were executed.

The law virtually proclaimed, as it now does, “that the surgeon should possess aptitude and skill (as well as a diploma), and subjected him who failed to display proper skill to pecuniary forfeiture, in the civil courts, at the instigation of any dissatisfied patient; yet the only mode of acquiring that skill—namely, from dissecting the dead clandestinely obtained—was, in the criminal courts, held to be a misdemeanor, punishable by fine and imprisonment.” Such

is, in effect, the law under which we, in Ohio, are studying anatomy to-day; and such are the laws which, *for so long a time*, forced upon communities the services of resurrectionists and the crime of body-snatching.

To relate the many stories told illustrative of the character and adventures of these men—the resurrectionists—would require much more time than we are permitted to give the subject. I will give but one illustration. Those who wish to pursue the subject further, will find in the lives of Sir Astly Cooper and John Hunter full details. But to our illustration, which I take from the life of Sir A. Cooper. A pupil, who was conveying a body, by a coach, to his hospital, was astonished to find himself in front of Bow-street police headquarters, when the driver, tapping at the front window of the carriage, said to his affrighted employer within: "Sir, my fare to so-and-so is a guinea, unless you wish to be put down here." The reply, without any hesitation, was: "Quite right, my man; drive on." In order to protect the grave-yards, in the vicinity of London, the walls were sometimes raised six or eight feet above their usual height, and topped out with broken glass and iron spikes; spring-guns were set in the church-yards, but they were useless, because if the resurrectionist was not intimate with the gravedigger, or watchman, he sent a woman to the funeral as a mourner, to note the position of the traps to which the wires were attached. Graves were often watched for weeks by persons hired for the purpose, and often, too, by relatives of the deceased, but all these devices and watchers were useless against the persistent efforts and cunning of the resurrectionists, as the high price paid for subjects—often as much as five hundred dollars for a single subject—was sufficient to induce them to incur all risks. So daring and expert were these men, and such their character, that Sir A. Cooper stated, in his evidence before the parliamentary committee, that no matter what the social position of any person in England, he could obtain his body if he desired it; and such villains were they, that for a respectable price, they would unhesitatingly make a subject of him, their best, though unwilling patron.

May we not, with truth, assert that governments ought to sustain, at least some degree of the odium which attaches to resurrectionists and anatomists?

Art. 2.—Some Suggestions on Transfusion of Blood.

By EDWARD RICHARDSON, M.D., Louisville, Ky.

A case of transfusion of blood recently reported in the Cincinnati LANCET AND OBSERVER, by Dr. Shriver, of Bethany, West Virginia, is one which, it seems to the writer, ought to arrest the attention of the profession. In a case of diabetes mellitus, where the usual remedies were unavailing, the transfusion of fourteen or sixteen ounces of blood taken from a lamb produced at once an entirely new condition of the patient, changing existing morbid actions into those of health, and effecting rapidly a complete and permanent cure. Dr. S. certainly deserves great credit for his boldness in venturing upon a measure so purely experimental, as well as for his address in constructing the simple apparatus employed, and the skill with which he accomplished the operation without the aid of any professional assistant.

The success of transfusion in this case naturally gives rise to various reflections as to its probable utility in many other cases to which it has never yet been applied, and suggests many things seemingly important, some of which I will endeavor briefly to particularize. Some of the facts involved in the case are: 1. That we have here a cure effected in a constitutional disease by a direct action on the blood itself; 2. That a large quantity of the blood of an inferior animal, in which the blood corpuscles are oval and not circular, as in man, and are otherwise different as to size, etc., was introduced suddenly into the human system without injury or even discomfort; 3. That certain morbid actions going on in important organs of the body, as in the liver and kidneys in diabetes, were at once arrested and changed to those of health by an alteration in the condition and constitution of the blood itself.

There is here opened up a vast field of inquiry to the thoughtful practitioner in regard to the possibility of extending such a method of cure to various intractable diseases, and of operating directly upon the blood itself, in order to arrest or modify, not only constitutional disturbances, but special functional derangement of the vital organs.

It is justly said by the very highest authority that "the blood is the life," or, otherwise, that "the life is in the blood." The entire apparatus, indeed, of digestion, assimilation, and excretion, embracing a large proportion of the body, may be regarded as merely

the means of preparing and preserving in proper condition the fluid of the general circulation which we call blood. From this blood the real nutriment of the system itself is derived, and the very organs which contribute to its production, or whose office it is to eliminate from it all hurtful matters, are wholly dependent upon the blood itself for their own vitality and ability to perform their functions. Seeing, then, that the blood itself is the great end of the chief organic operations, and at the same time the immediate means by which nutrition and life are imparted to the entire system, it would surely be a great improvement in the art of medicine, if, instead of the roundabout and uncertain methods usual in the practice of medicine, the physician could approach more closely to the seat of life, and so modify the condition of the blood itself as to relieve and control morbid actions.

It is certainly a singular neglect that in symptomatology the actual condition of the blood is not made a special matter of exploration, and that, though certain changes in it, as a paucity of blood disks, may be inferred from the pallor present in anæmia and in some other affections, no proper methods are employed in practice to ascertain the precise state of the circulating fluid upon which health and life depend.

Various important facts have, indeed, been ascertained by the able investigators, such as Hewson, Gullever, Wagner, and others, who have made the blood a special subject of investigation; but their discoveries are not practically applied in individual cases, so that really little benefit accrues from them. It avails nothing to know that in inflammation the blood rapidly increases its fibrin and its white corpuscles; that blood-letting as quickly diminishes the proportion of red globules in the remaining mass, or that in malignant fever there is a marked diminution in all the solid constituents of the blood as well as in its power of coagulation, if, in practice, no effort is made to ascertain the exact state of the circulating fluid, or to effect in it a salutary change. Heretofore, *transfusion* seems to have been employed merely to increase or restore the *quantity* of the circulating fluid. But there seems to be no good reason why it may not be used to change the blood as to its *quality*, and if judicious experiments should prove this possible, it is easy to see what important changes would at once result in the practice of medicine.

If, for example, the blood had become so vitiated as to be no longer capable of imparting the necessary vigor to the different

organs and the chylopoetic system thus enfeebled, was rendered unable to prepare a better circulating fluid, the introduction of healthful blood by transfusion might at once infuse new vigor into all the vital processes, and enable the organs to resume their normal action. Or could it be ascertained that certain substances injected into the vessels possessed the power to modify and improve the condition of the blood, to change the proportions of its fibrin, of its serum, or of its corpuscles, or to restore these by a direct action to their normal state, what facilities would be thus afforded in the management of disease! Could the formation of fibrin be thus repressed in inflammation or the amount of red globules increased in chlorosis, or that of water in cholera, might not a control over these diseases be attained far more immediate and direct than by any other remedial measures? There is here, it seems to me, a vast field for experimental investigation, which might lead to most important results. Could the condition of the blood, for instance, in pyæmia, in puerperal fever, in the fermentation induced by a minute particle of poisonous virus, be fully explored and suitable antidotes discovered, which, injected into the veins, would restore a healthful state to the circulation, how great a desideratum would be attained.

It might be objected that it would be dangerous to subject the patient to the necessary tests, and that direct applications to the blood would be highly objectionable, as involving serious surgical operations.

There would seem to be, however, but little force in the first objection, since the circulating system is known to be exceedingly *tolerant* of the presence of foreign substances. It is, indeed, itself the medium of conveying the effete matters of the system to the proper emunctories, and it is well known that the constitution of the blood itself may for a time be very greatly altered without imperiling life. As to the second objection, it may be replied that the operation of transfusion, even as usually performed, is a very simple one, and that it is quite possible to simplify matters still further. A simple instrument, like the hypodermic syringe, might, for instance, be used, and, through a delicate stilette introduced into the veins of the hand or arm, solutions of various kinds, or fresh blood itself, could be gently introduced without danger or disturbance.

It seems to me that the introduction of small quantities of blood daily in this manner might be a most valuable resource in cases where, from certain causes, the nutrition of the system by the

usual channels is suspended. The use of nutrient clysters and the other feeble methods resorted to in such cases are surely most inefficient compared with the direct result of the daily introduction into the blood-vessels of a proper quantity of fresh and healthy blood, since this fluid subserves all the purposes of life, and it is simply for its production that the entire digestive and assimilative systems exists at all. These systems might remain indefinitely quiescent, or even be totally absent, if, without them, a sufficient amount of blood could be regularly supplied to the general circulation.

Upon the whole, it certainly seems evident that direct action upon the blood itself has not heretofore received the attention which it deserves.

Art. 3.—Strange Case of Death.

By E. E. RIOPEL, A.M., M.D., Cleveland, O.

Minnie S. B. Married, æt. 26; German descent; delicate, but healthy. Has never been sick that she remembers of, and during her pregnant state has gained in flesh, felt quite well and strong. I was called at 9 p. m., July 26th, but as there were no labor pains and the os dilated not more than an inch and rigid, I concluded to do nothing, advising her husband to call on me if needed through the night. Next morning at 8 a. m., the os opened about $1\frac{1}{2}$ inches, yet rigid, especially the internal os. Ordered 7 grs. quinine every two hours through the day. At 5 p. m., I was called in in haste; found her suffering severely from her back. I dilated the os sufficiently to allow the fetus to pass, which was done in about one hour, and delivery effected. In about five minutes the placenta came away by slight traction on the cord. On examination I found the placenta not entire. I at once introduced my hand to find the remaining part and found it loose. I, however, had hardly got my hand in, when, as if by a suction force, it was seized by a contraction of the neck of the womb, and so firmly, that it was with great difficulty I drew it out, but the patient was *dead*. Must have died immediately after the spasm that fastened my hand. Now, the question with me was, what was the cause of death? Could the irritation caused by the introduction of the hand have produced the convulsion and death, or was it more likely from some other

cause? It is said, and by *teachers*, that the introduction of the hand is *harmless*. My own convictions have always been opposed to the act; had I taken a second thought in this case I should not have done so. The hand is not a foreign body as compared to a dead fetus, and certainly, when a dead fetus exists in a womb, what an effort it makes to get rid of it. The hand, as a foreign body, differs in that it is a powerful irritant to the then excitable condition of the uterus. The want of symmetry of the hand besides, carries with it cold liquids, some of which may be in a more or less decomposed state. Now, if the hand could be introduced at an even temperature with that of the womb, and without any extraneous matter, there is a *bare possibility* that it would not be a serious operation; but that is a question not at all practicable, or even possible. Let this example be a *caution*, as it is a *solemn warning* to me, at least. I am satisfied that death, in this case, was caused by the introduction of the hand, otherwise there would have been some complaint of one kind or another.

[Death may have resulted, in this case, from embolism. A post-mortem would, in all probability, have revealed the true cause of death.—Ed.]

Art. 4.—*Gratis Diplomas.*

By J. A. KIMMEL, M.D., Findlay, O.

The fifty-fifth Annual Catalogue and Announcement of the "Medical College of Ohio" has come to hand, and makes quite a respectable showing.

But while I am pleased to notice the facts that go plainly to show that prosperity and success are crowning their effort, as is evinced by the number of matriculants and graduates of the last session, the talent and good cheer of the professors as well as the praise of the students; yet I very much deplore the practice of granting *diplomas* and *ad eundems*, too loosely, to men whose medical ability they know very little about; they have had very little opportunity of ascertaining, as I believe is practiced by this as well as some other *medical*, as well as *other colleges* in the land.

Men have left this part of the country, and returned in a week or two, or even in a day or two with "Sheepskins" from the

Medical College of Ohio, and some local editor or printer's devil (without being prompted by the receiver of the diploma of course (?)) writes up a half column in the local newspaper for a couple succeeding weeks relative to the subject; and all this is done without the knowledge and to the profound chagrin of the licentiate (?) who is sure to practice the Scripture injunction of returning good for evil, and by so doing heap coals of fire upon their heads, which is most easily done by canceling a bill, making a handsome present, or inviting to a grand supper the men who have dared to publish him to the public in such an unprofessional manner.

Now the facts are these; the people deprecate, promptly, and justly too, an institution that conceals within its closet a patent electrical curriculum for grinding out diplomas in from one to ten days after the student has sent in his order. And while the profession are "running a muck" of quackery, and crying for a rise in the standard of qualification, the medical colleges are not putting the theory into practice, nor ever will as long as they persist in their cheap bids for paltry influences by pandering to the favor of a few who delight to make themselves notorious on a cheap scale, to the disadvantage of the reputation of the profession at large, and of those institutions which labor for a true elevation of qualification.

What shall we answer when it is cast into our teeth that "diplomas are not worth more per cord than bass-wood when they can be obtained by going after them," or upon the merit of having written a medical compilation, and christened it a "valuable acquisition to medical literature." I am sorry to say there is a monomania in some medical colleges to exfoliate diplomas, and to make every Tom, Dick, and Jim, a graduate or *ad eundem* of their institution without knowing or even caring whether or not the recipient is in the least worthy of the favor. And, on the other hand, for medical bodies to make every professor whether first, second, or third class an honorary member of their association. This is too much like children's play. "You come over and help to build my play-house, and I will help you to fix yours."

It is very frivolous, and not in accordance with the dignity of true greatness.

No man is a *bona fide* licentiate of any college, unless he is so through a regular course of said college. Neither is any man a member of any body who has not been regularly initiated according to the rules and regulations of said body. Public opinion, which is

the severest court a man was ever arraigned before, will have no respect for us as a profession, nor mercy on us when our feet slip, if we have within ourselves no real merit or dignity. Let us do away with this gratis business, and only then will we take our place in the proper rank, and let us give no farther cause to the public to depreciate our standard. But promptly do away with cheap membership, cheap diplomas, and cheap *ad eundems*.

Art. 5.—Carbon Oil.

By J. D. WEST, M. D., Hopedale, O.

Is it a remedy for tapeworm? Not long since I was summoned in great haste to see a child under two years of age, which had by accident swallowed a quantity of carbon oil. The act of swallowing the oil so strangled the child as very much to alarm the mother. But having had some experience of the effect of the oil on a previous occasion, I most feared its toxicological effect, hence proceeded at once to evacuate the stomach, which I succeeded in doing pretty effectually. I then administered a full dose of castor oil. The next morning the child had several evacuations from the bowels. The mother noticed something unusual on the diaper, which she detached from the feces and brought to me, which, upon examination, I found to be a part of *tænia solium*. I told her to watch carefully the passages. Several feet of the monster were voided, but we did not find the head. Whether it had passed unobserved or not can not be told, possibly it had before the mother's attention was called to it. Did the carbon oil destroy the worm, or was its death only a coincident?

I would say that the child had apparently enjoyed good health.

Proceedings of Societies.

CINCINNATI MEDICAL SOCIETY.

Reported by B. Stanton, M.D.

The Cincinnati Medical Society met in regular session, Tuesday evening, October 5, 1875, the president, Dr. Kemper, in the chair.

REPORTS OF CASES.

Dr. Murphy said he was called, on the 18th of August, to see Mrs. C., aged 33, then pregnant for the third time—not far from the seventh month. She had miscarried twice at about the same period of pregnancy. She had enjoyed good health, but at that time complained of weight and bearing down in abdomen and uterine region. Quiet, moderate diet, and cool drinks were ordered; the bowels to be kept regular. On the 3d of September he was summoned in haste—a hemorrhage to the amount of eight or ten ounces having occurred. On arrival, he found that another physician living near had seen and prescribed for her, and the hemorrhage had ceased. He remained half an hour, when, the hemorrhage not returning, he took his leave, ordering her to remain perfectly quiet. On the 13th, a slight hemorrhage occurred, and again a day or two later, but soon ceased. At 2 P. M. on the 20th, he was again called on account of a recurrence of the hemorrhage, which was intermittent. At 6, there was an increase of the hemorrhage. Dr. Taylor was then called, and agreed with Dr. M. that it was a case of placenta prævia. A sponge of considerable size was introduced and pressed against the os, where it remained until morning. At 6½ A. M. an examination was made. The os was found but little dilated; the vagina soft and relaxed. Very soon after the membranes ruptured, and on examination the feet were found presenting, and the labor was soon completed with the loss of but little blood.

Dr. Murphy said, it has been held by some syphilographers that the child of a syphilitic father can not be born without infecting the mother during fetal life. He had treated one patient for four years with constitutional syphilis, who had taken mercury almost continuously, with the exception of a time when iodide of potassa had been substituted. The eruption had disappeared, and the patient de-

terminated to get married. Previous to impregnation of his wife, and after the disease had apparently entirely disappeared, there was an eruption on the penis, which disappeared under treatment. After this, impregnation occurred. Would you now expect an infected fetus? And if the fetus were infected, would it infect the mother? The child showed some slight appearances of the disease, the mother none. When is it safe for a man who has had syphilis to marry? It has been said that if a man passed one year without any manifestation of the disease it would be safe to marry. To make an impression on this disease with mercury, is it necessary to produce ptyalism? These are important questions, and questions on which writers on the subject are not agreed. Some things heretofore laid down as axioms by syphilographers, are now being overturned.

Dr. Taylor said, in regard to the questions of *Dr. Murphy*, *Leopold* has just published an article on premature births, in which he takes up this subject. His opinion is that the mother may remain perfectly healthy, while the child is affected.

Dr. Culbertson said he was called some years ago to attend a woman in confinement. The child had a syphilitic eruption, and died of convulsions at the age of three months. The father denied ever having had syphilis. Three weeks after the child was born, the mother had a chancre on the nipple and buboes in the axilla. After the death of the child the mother apparently got well. In time she became pregnant again. The second child had syphilitic symptoms. He had never seen any signs of the disease in the father, and none in the mother since the disappearance of the buboes which she had after the birth of her first child. As a matter of interest, he mentioned that the second labor was apparently perfectly painless.

Dr. Holdt. On what depends the infection of the mother? Is it through the fetus or by contact with the husband? We know that some circumstances must combine to make one susceptible to infection. We may at one time contract an infectuous disease, and yet be exposed many other times without danger. In many cases, the wife, being of good constitution and in good health, may resist the disease; at other times the circumstances being favorable, she might be infected. As to the question, when we may consent to a marriage, there is not the slightest hope of ever being able to say that a man who has had constitutional syphilis may marry with perfect impunity.

Dr. C. P. Judkins thought that, in some cases, the transmission of the disease might be due to the fact that the husband was diseased in other mucous surfaces than the mucous membrane of the penis, the wife being infected through other surfaces than the vaginal membrane. He does not hesitate to consent to the marriage of patients after one year of freedom from syphilitic symptoms. He doubts whether there is any infection through the semen.

Dr. Dandridge thought that in the case reported by *Dr. Murphy*, it would seem reasonable that the child may have inherited the disease from the father through the semen, the mother escaping.

Dr. Mackenzie presented a specimen of ulceration of the intestine, principally in the ileum; one ulcer in the cæcum, just below the ileo-cæcal valve. The specimen was removed from the body of a man who had died in the hospital in *Dr. Holdt's* ward. The ulcers were in Peyer's patches, and were transverse. On the peritoneal surface, over the ulcers, were found minute granules. No tubercles in any other organ. One of the ulcers had perforated the intestine, but there was no escape of the contents because of adhesion with an adjacent fold of the intestine. The mesenteric glands were enlarged. This case was of interest because of the history, and the ulcer being in a transverse position. This would lead us to suppose that they were tubercular. The edges were not elevated. Patient had been sick three weeks.

Dr. Holdt said the patient, a man forty-one or forty-two years old, was admitted to the hospital about the 7th of September. He had been working on the Cincinnati Southern Railroad. He had been chilly for several days. Pulse from eighty-five to ninety; tongue coated; temperature somewhat increased. From the first he showed symptoms of a moderate typhoid fever. His temperature ran up gradually to about $103\frac{1}{2}^{\circ}$ or 104° , and once so high as 105° , then declined to from 99° to 101° . The tongue became dry, with sordes on the teeth. The prevalent symptoms were the cerebral. He complained of his head; had some difficulty of hearing, and was delirious. Cerebral symptoms gradually increased. His stools resembled typhoid-fever stools. He became comatose three days before his death and remained so to the end. The liver and spleen were a little enlarged, and the former was found slightly softened. The brain was found normal. There had been no eruption. He doubted the tubercular character of the disease, tubercles being found in no other part of the body. Thought the history, symptoms, and pathological appearance indicated typhoid fever,

although the ulcers did not present the appearance *usually* found in that disease.

Dr. Taylor thought this did not present the history of tuberculosis. The family history was good. The man had enjoyed good health until within three weeks of his death. The duration of the disease was too short, unless there had been miliary tubercle, in which case there would have been tubercular deposit found in other organs. If it were a case of tubercular ulceration, it would not have been confined to Peyer's patches, but other glands would have been affected. Primary tubercular ulcer is very rare. Tubercular ulcer is nearly always secondary to tuberculosis of lungs. Tubercular ulceration is commonly marked by granular appearance in the peritoneum over the seat of ulcer. This appearance may not be owing to tubercular deposit in all cases. The history, etc., of the case do not warrant the diagnosis of tubercular ulceration. He was disposed to regard it as a case of typhoid fever.

Dr. Murphy thought it would not always do to make a diagnosis from the pathological appearances. The age, previous good health, absence of tubercular diathesis, premonitory symptoms, temperature, pulse, gurgling in ileo-cæcal region, appearance of the stools, condition of tongue, delirium, etc., all point to this as a case of typhoid fever.

Dr. Mackenzie said he judged of the character of these ulcers simply from their anatomical appearance. Peyer's patches are the parts most frequently affected in tubercular ulceration. In typhoid fever the ulceration occupied all the space where there was medullary infiltration. In this case only portions of the glands were affected. The direction of the ulcers was not that usually found in typhoid ulceration, which is longitudinal. The gurgling which was present might occur in ulceration of any kind. The granules on the peritoneal surface would seem to corroborate the view that it was tubercular.

Dr. Carson agreed with the line of argument that this was a case of typhoid fever. The locality from which he came would favor this view, other cases of typhoid-fever coming to the hospital from the same place. It was hardly probable that this amount of tubercular trouble would have caused death in so short a time.

THE MICHIGAN STATE BOARD OF HEALTH.

The Michigan State Board of Health held its regular meeting at Lansing, October 12, 1875.

The members present were Drs. H. O. Hitchcock, R. C. Kedzie, and A. Hazlewood, Rev. C. H. Brigham, Rev. J. S. Goodman, and Dr. Henry B. Baker.

Dr. A. Hazlewood, as committee on epidemic, endemic, and contagious diseases, read an article on "Trichinæ." The paper gave an historical review of the subject, mentioning the names of Zenker, Virchow, and Leukart as the prominent investigators whose researches have developed most of our knowledge concerning this parasite. Their combined researches are thus epitomized by Prof. Heller: "Man becomes infected with trichinæ by the use of trichinous pork. The muscle trichinæ in the stomach become freed from their capsules, and develop in the intestines of cats and dogs, and also in that of man, to mature sexual worms, which attain their full growth at the end of about seven days and give birth to living young. These young trichinæ migrate from the intestines in which they are situated, to the muscles of the same person or animal. During their migrations they are found in the mesenteric glands, abdominal cavity, and pericardium. They penetrate into the interior of the muscular fibers, and cause the destruction of the contractile tissue. Within the muscles they grow to perfect muscle trichinæ. These migratory processes bring about in man a severe febrile disease—trichinosis—which may result in death." The speaker recounted cases of trichinosis which occurred in New York, as detailed by Prof. Dalton. He read a long report from M. Northup, M.D., of cases of trichinosis at Port Huron, and also read an article from the pen of Dr. Herman Keifer, of Detroit.

Dr. Kedzie read an article on "The Use of Poisons in Agriculture." After giving a general description of the different poisons used for destroying injurious insects, he gave a specific description of "Paris green," the aceto-arsenite of copper, which has been so largely used for the destruction of *Doryphora decemlineata*, or "potato-bug." The paper was based on numerous analyses of soil, and of straw and wheat raised on soil dressed with Paris green. The analyses proved the absence of any arsenic in the straw or grain; the analysis of soils proved that the arsenic does not remain as Paris green, but unites with the hydrated oxide of iron, a substance pres-

ent in all fertile soils, forming a compound insoluble in the usual solvents of the soil, such as carbonic acid and ammonia. There is, therefore, no danger of contamination of well-water by the washing of the poison from the soil. In the discussion which followed, Dr. Kedzie suggested that the ill-effects which have been observed from the use of potatoes, might be due to the destruction of vines by bugs, and not to any injury done by the Paris green.

Dr. Kedzie made some remarks concerning danger from the ill-construction of public halls, hotels, etc., in their means of exit. On motion, he was requested to prepare a paper on that subject. Dr. Hitchcock was also requested to prepare an article on the subject of regulations to be observed by druggists concerning poisons.

Dr. Kedzie reported that he had prepared ninety sheets of ozone paper, and he left them with the secretary for distribution to meteorological observers.

The president said he had been requested to have a paper prepared by some member of this board, to be read at the next meeting of the State Teachers' Association at Grand Rapids, in December next. On motion, Rev. Mr. Goodman was requested to prepare and read a paper at that time and place.

The secretary read a communication from A. A. Day, state inspector of illuminating oils, giving a history of the organization and present status of the system of oil inspection in this State. It is to appear in the annual report of the board.

The secretary read a communication from Dr. Elisha Harris, secretary of the American Public Health Association, inviting members of this board to attend the next meeting of that body. The secretary also read a communication from Dr. Geo. E. Ranney, relative to cases of trichinæ treated by him supposed to be caused by drinking the bad water of Saginaw. It was referred to the board of health of Saginaw city. A resolution of thanks was adopted for the prompt manner in which the board of health of Saginaw city had responded to a previous resolution of this board, expressing the hope that it would continue its efforts until the common council should afford the people of that city an abundance of pure and healthful water.

Communications from J. P. Stoddard, M.D., of Albion, and J. H. Beech, M.D., of Coldwater, relative to criminal abortion, were read and referred to the committee on legislation. Dr. Stoddard's proposition is that every death of an unborn child be considered a "sudden death," and as such, a proper subject of inquiry by a coroner's jury.

A communication from A. Nash, M.D., of Lapeer, giving cases of sickness from drinking impure water, was referred to the committee on water-supply.

Circulars are to be issued to school directors and teachers, transmitting documents on "Treatment of the Drowned," for distribution to the five hundred thousand school population of the State; also, a circular to editors in Michigan, asking their co-operation. Rev. J. S. Goodman was authorized and requested to make investigation into the sanitary condition of the common country schools of the State.

The secretary was directed to procure books, periodicals, etc., for the library of the board. Rev. Mr. Brigham read a paper on the influence of occupation upon health, referring to the dust and impure air of factories and offices, and to the need of more recreation and outdoor exercise. The paper was ordered printed in the next annual report. Dr. Baker read a brief paper on "Reproduction of Disease Germs," and also one entitled a "Sad Case of Failure to prevent Deaths believed to be preventable," both of which were ordered printed in the annual report. Dr. Hazlewood was requested to prepare a paper on the influence of vaccination, giving statistics of mortality before and after its practice.

The secretary's quarterly report mentions that two thousand five hundred "Rules and Regulations recommended for adoption by Local Boards of Health," have been published and distributed to all township, village, and city boards of health in the State—all publications of the state, sanitary journals, and individuals interested in the subject. A package of pamphlets and placards on "Treatment of the Drowned," has been sent to the chiefs of police for distribution in each city of the State, and a circular soliciting correspondence has been sent to seventy physicians and sanitarians in the State, forty-eight of whom have accepted the duty. Many, in addition to accepting, expressed their appreciation of the work of the board. Blanks for annual report of clerk of local boards of health have been prepared and printed, and are now being sent out. An improved meteorological blank register has been published, and its distribution commenced to meteorological observers throughout the State. It is hoped that more specific knowledge may be gained respecting the influence of meteorological conditions, upon certain diseases.

An order-book and classified expense account-book have been

prepared, in which the accounts of the board are kept with much system. H. B. B.

The Georgia State Board of Health has become organized and is in working order ; in the State of Alabama, the State Medical Society has been legally established a State Board of Health, and the county societies are to act as local boards of health.

WABASH MEDICAL SOCIETY.

The Wabash Medical Society met in University Hall, at 11 o'clock A. M., in Vincennes, Indiana, on the 14th September, 1875. The minutes of the last meeting were read and approved.

In behalf of the committee of arrangements, looking to a joint meeting of Terre Haute, Mitchell, Evansville, and Southern Illinois medical societies in this city, Dr. Beard reported that satisfactory progress had been made, and that some of the profession in Kentucky had also signified their intention to join with us on that occasion. The time agreed on is the 26th of October, at 6 P. M., in this city, at the court-house. He said the indication is that there will be a large attendance and an interesting and profitable meeting. The committees of the several societies had agreed upon the programme of business, and the same had been printed and was in course of circulation at this time. Recess.

AFTERNOON SESSION.

The society met again at 1½ o'clock P. M., when Vice-President Peck took the chair, and the president Dr. A. Patton, read his inaugural address, taking for his subject "Medical Societies," and discussed the manner in which they should be conducted to promote the object for which they are instituted. The address abounded in practical and wholesome instruction, and was referred to the committee on publication.

Dr. Peck read an essay on the therapeutical action of ice, in the treatment of diseases, claiming for it sedative, astringent, and refrigerant qualities, and applicable in the treatment of most diseases. He illustrated his views with cases from actual practice, one of which is remarkable. A man received a thrust in the abdomen with a bayonet, which severed the jejunum and pierced the liver. Al-

though the case was regarded hopeless, the injury having been sustained some hours, and the bowel presented a swollen, blackish appearance. he nevertheless cleansed the parts, united the muscular coats of the guts with the interrupted suture, and returned it to the abdomen, and applied a warm poultice, administered an anodyne, and left the patient, as he thought, to die. On his return visit the following day, he found the patient had rallied, and was in a decidedly better condition than he was the previous day. He then applied ice to the wound, and continued the same for several days. On the sixth day he was sent for in haste, the messenger reporting that the patient was likely to die from hemorrhage. Upon his arrival he found no bleeding, but a profuse discharge of pus, mixed with bile, and the suture in it. He continued the treatment, with a supporting diet, and the patient made a perfect recovery, the external wound closing in due time, and the man is yet living. He thought the ice treatment was the salvation of the patient. The paper was referred to committee on publication.

Dr. Pugh read an interesting paper entitled "Physical Diagnosis." Dr. Keith read a paper on the "Uses and Abuses of *Veratrum Viride*," suggested by a former discussion on the subject. These papers were referred as usual. Dr. Bowyer, of Olney, Ill., being present, was introduced by Dr. Hays, and invited to participate in the discussions. He availed himself of the opportunity in criticising the paper on *veratrum viride* very ably, coinciding generally with views of the paper, and adding his testimony to the value of the remedy.

The subject of uterine hemorrhage, having been alluded to by Dr. Peck, and the application of ice in its suppression, Dr. Smith related a case where he had been enabled to suppress the uterine hemorrhage with a lump of ice introduced into the organ, when all other remedies had failed to check it, and syncope existed and death seemed inevitable.

Dr. Barton said he had used capsicum, in full doses, in many such cases, with the most satisfactory results. The doctor also said, as he had been questioned in relation to the use of minute doses of hydr. murias dulcis, he used it in doses from the fifteenth to the fortieth part of a grain, triturated with sac. alba, with the happiest effects, as an alterative, with no unpleasant sequela. He thought the med. cine, ground down to an impalpable powder, with the sugar, was more readily taken up by the absorbents, and therefore acted more potently than it otherwise would; and he denied, that thus

mixed, the medicine would, by ordinary agents, be changed into the bichloride, as had been asserted in some of the journals.

In relation to the general use of ice, Dr. Freeland asked the members to express themselves on the use of it in the treatment of dysentery. The prevailing sentiment, as enunciated, was that in a febrile or inflammatory complication, ice was a valuable remedy in the treatment of that disease, administered per orem. While the doctor occupied the floor, he said he believed he had accomplished a feat in obstetrical practice that none of his confreres had, and that was he had acted as accoucher, in four different counties, within the space of twenty-four hours, and left them all as "well as could be expected," suggested one of the members.

Dr. Freeland then offered an addition to his former paper, entitled "The Composition of the Human Body, and the Changes that take place in it in Health and Disease," which was received and referred with the former paper.

Vincennes was selected as the next place of meeting. Time, December 14th (second Tuesday) next.

The president appointed Drs. Beard, H. M. Smith, Bell, Hayes, Hoover, Barton, and Keith, essayists for the next meeting.

On motion, the society adjourned.

ALFRED PATTON, *President*.

H. M. SMITH, *Secretary*.

Local Temperature of Paralyzed Parts.—Professor Schiff (*Lo Sperimentale*—*London Medical Record*, July 15, 1875) records some interesting observations on the above topic. These show that (1) The temperature in the terminal part of the paralyzed limb is not invariable, but is subject to slow and rather considerable variations. (2) Each of these variations extends over a period of several hours—sometimes there are only two, and sometimes three in twenty-four hours. (3) Sometimes other oscillations of a short duration alternate with the greater ones. (4) These oscillations in two limbs, placed in the same external conditions and equally paralyzed, do not always run parallel; sometimes one extremity is very warm and the other very cold, which indicates that the cause which produces the oscillations does not depend on a general condition of the body, but acts locally on each part. (5) To determine if a paralyzed part be in general rendered warmer or colder than the normal state by paralysis, two measurements daily at stated times, are not sufficient; the medium temperature must be ascertained.

Selections.

Sulphate of Cinchonidia.—For some time past, the matter of the supply of bark for the manufacture of sulphate of quinia has been one of solicitous consideration on the part of those who are aware of the great importance of this article.

Powerless to effect any modification of the system of wholesale, and often wanton, destruction of the trees, the natural recourse has been to obtain the greatest yield of medicinal principle from the crude material. In this way, sulphate of cinchonia, sulphate of quinidia, chinoidine, and lastly, sulphate of cinchonidia, have been produced.

The last-named article was first methodically, on any important scale, used with a view to test its efficacy in comparison with sulphate of quinia, in the year 1866, when the Madras government in India appointed a medical commission for the purpose.

From the report of the commission it appears that the number of cases of paroxysmal malarious fever treated was 2,482. Say, with quinia, 846; quinidia, 664; cinchonia, 569; cinchonidia, 403.

Of these 2,482 cases, 2,455 were cured, and 27 failed.

The following was the difference in comparative remedial value: With sulphate quinidia, the ratio of failure per 1,000 cases was 6; quinia, 7; cinchonidia, 10; cinchonia, 23.

The marked success of sulphate of cinchonidia on the other side, has led to its introduction in the United States.

In 1873, a systematic trial of the article was made by Dr. Wharton Sinkler, in the wards of the Episcopal Hospital of Philadelphia.

Dr. Sinkler gives a detailed account of the results of his experiments in the February (1874) number of the *Medical and Surgical Reporter*, of Philadelphia.

He states:

“In my own investigations with cinchonidia, I determined simply to compare it with quinine in the treatment of intermittent fever, and therefore administered it in the same dose and manner in which it is customary to give quinia in our Philadelphia hospitals, in the above-mentioned disease. The formula used was:

R. Cinchonidiæ sulph., gr. iv ; acid sulph. aromat., m. iv ; aquæ, fl. 3 j. M.

"This dose was given every four hours, beginning as early in the day as possible, until grs. xvj had been taken. The same amount was continued until five or six days after the last chill, when the dose was reduced to grs. xij a day. After a day or two more, but six or eight grains a day were given. There were seventeen cases of malarial fevers in which the cinchonidia was tested. Of course, this is not a sufficient number upon which, alone, to base any positive conclusion, but the result of the treatment was confirmatory of that of the Indian physicians, and was so eminently satisfactory that I report the cases briefly, in order that other physicians throughout the country may have the opportunity of testing the antiperiodic and tonic properties of cinchonidia."

Of course, in a brief paper like this, we can not follow Dr. Sinkler in the details of the cases, but we can recount his results.

We might, however, quote his remarks on one or two of the cases.

"Case XIV. H. S., æt. 26, sailor, admitted September 27. In June, while lying in his vessel in the Potomac river, near Washington, he contracted intermittent fever. Since then he has had chills at irregular intervals. Sometimes a paroxysm daily for a week, and then none for several days. He has taken quinine from the beginning of the attack, but without relief. His last chill was on September 25. On admission his spleen was enlarged and tender on pressure. Was ordered cinchonidia, grs. xvj a day. On October 12, the cinchonidia was suspended, as he had had no symptom of a relapse since his admission. When this note was taken, on October 20, the patient was still in the house, under treatment for bronchitis, but had had no evidence of malarial trouble."

"Case XVII. Mrs. A. B. has been suffering from quotidian intermittent during the months of July, August, and the early part of September. The treatment has been quinine, grs. xvij a day, in doses of grs. ij every hour before the time for the paroxysm. This treatment acted only as a palliative, for as soon as it was suspended relapses occurred. About the middle of September, the patient had a recurrence of her chills, and Dr. Knight gave her grs. xij of cinchonidia one day, and the next day grs. xvj. By this means the usual paroxysm was prevented. The patient was afterward put on arsenic and iron, and up to November 8 had not had another chill."

In six of his seventeen cases quinine had been administered and

failed. In one of these, that which we last quote, the use of the quinia had been pushed to its extreme effects of ringing in the ears and headache. With the cessation of medicine the disease returned. In all these cases there was prompt relief from the use of cinchonidia.

Dr. Sinkler concludes:

"In only three cases was there any relapse while the patients were under observation, and they were all kept in the hospital for some days after they seemed entirely well.

"In none of these cases did I observe any unpleasant effect from the use of the drug. Unlike quinine, cinchonidia caused no headache, ringing in the ears, or disordered vision, and there was no disturbance of digestion. In fact, in one case, while the patient had been taking quinine his stomach became disordered, but under the use of cinchonidia the gastric irritation subsided."

Since Dr. Sinkler made his experiments, a number of physicians over the country, to whom samples have been furnished, have been making trials of it—and as the reports of those who have published their experience attest—with satisfactory results.

Over forty letters have been received from different parts of our country, from those who have actually tried the article.

These reports agree almost universally with regard to the absence, when sulphate of cinchonidia is used, of the unpleasant after-effects frequently resulting from the employment of sulphate of quinia.

When used in the same or nearly the same doses as sulphate of quinia, it ranks equal to it in antiperiodic and tonic effect.

The following are a few of the statements in regard to the article:

"Dr. C. B. Reed, Caledonia Station, Boone county, Illinois, April 15, 1875: My experience has all been confined to districts pervaded by malaria, causing considerable periodic disease of the intermittent and remittent type, with its well-known influence upon all prevailing diseases. My uniform success in the treatment of disease is mainly due to the very free use I have made of the preparations of bark. Of these preparations I consider sulphate of quinia and sulphate of cinchonidia the best. As a tonic and febrifuge, I do not find any difference, though there are some of the immediate effects of large doses of sulphate of quinia that are very disagreeable to every one, and which prevent its being used in many cases. To the sulphate of cinchonidia no such objection exists. I con-

sider it capable of doing all that ought to be done by sulphate of quinia."

"Dr. E. Andrews, Professor of Surgery, Chicago Medical College, April 28, 1875: I have for two months been using sulphate of cinchonidia as a substitute for quinine. I find that in certain cases large doses arrest headache and neuralgia. One very sensitive patient, who is obliged to use quinia often, and well knows its effects, says that cinchonidia produces the same increase of vigor, without the unpleasant sensations that follow quinia."

"Dr. Wm. E. Quine, Professor Materia Medica, etc., Chicago Medical College, Chicago, April, 1875: So far as my experience in the use of cinchonidia has gone, it certainly justifies me in the belief that it ranks equal in power as a tonic and antiperiodic with any of the other derivations of the cinchona."

After the therapeutic value of a remedy is ascertained, it is very pertinent to consider it in a mercantile light.

In this, sulphate of cinchonidia has a decided advantage, being now sold at about one-third the price of sulphate of quinia. To the individual purchaser and the practitioner who compounds his own prescriptions, this is an important item.

Histogenesis of Cancer.—In his valuable paper in the scientific reports of the medical officer of the Privy Council, Dr. Creighton has dealt with the question of the origin of cancer from another side to that taken in the discussion at the Pathological Society last year. In that discussion, enriched as it was by the speeches of so many of the foremost men in the school of English pathologists, the question was dealt with in great measure upon clinical grounds alone; the result being that opinions were equally divided between the view of a purely local origin of the disease and a constitutional one. Dr. Creighton, carrying on his researches at the Brown Institution, has studied carefully the histological features of the disease, and the results of his inquiry not only go far to upset the doctrines of Virchow on this head, but also lead to some highly suggestive hypotheses as to the origin of primary malignant tumors. Using the term "cancer" in its widest sense so as to include not only those malignant growths which arise primarily from epithelial surfaces, but also the vast group of the sarcomata whose origin lies in the connective tissues, Dr. Creighton commences by stating the results of his examination of growths in the liver secondary to those arising in the skin, bones, uterus, spleen, etc. The study of the

formation of these secondary formations throws light upon the probable mode of origin of at any rate one great class of malignant tumors—the true cancers.

The mode of origin of secondary tumors is still a matter of debate. Many hold that they arise by the direct transference of the cells of the primary growths to the seats of the secondary formations; while others, including Virchow, maintain that there is a transformation of the pre-existing elements of the part into cells similar to those forming the primary tumor. Virchow, however, holds that it is only the cells of the connective-tissue framework that are so transformed, the highly specialized epithelial elements of the infected organs undergoing no change. Here, indeed, is the great point of divergence between the views of Virchow and those held by Dr. Moxon in this country, and confirmed by the author of this paper. Reinstating "vacuolation" into the place from which Dr. Beale, two years ago, had removed it, Dr. Creighton avers that this is the first change undergone by a liver-cell on its way to be transformed into cells similar to those composing the tumor, be this myxomatous, lymphomatous, epitheliomatous, or what not. Vacuolation is, in fact, the first stage of endogenous cell-formation—a mode of cell-multiplication which has received far less attention than it merits. Briefly, the process consists in the conversion of the greater part of the protoplasm of the gland-cell (in this instance of the liver) into a highly refractive material, probably of fatty nature, the remainder of the protoplasmic contents being either displaced to the periphery of the cell, or remaining free in the center of the cavity formed by vacuolation.

It is from this protoplasm, the vital properties of which are manifested by its deep coloration with staining reagents, that, by an endogenous process, new cells are formed, at first round and "indifferent," later assuming the specific forms characterizing the cells of the primary tumor. Of this process, with various modifications, Dr. Creighton has traced the progress in all its stages by examining growths in the liver of various size and development. All growing tumors in this organ are surrounded by a zone of indifferent cell-growth and by columns of liver-cell in the stage of vacuolation. The process is then a truly metaplastic (or heteroplastic) one, taking place in the protoplasm of the liver-cell under the influence of the primary growth—an influence which he terms "spermatic," the changes that occur in the liver-cell being strictly comparable with the metaplastic changes that occur in the ovum after impreg-

nation. It will be seen by this that the connective-tissue framework of the infected organ plays no part in the process, nor does it even in the formation of a stroma, which is so frequent a character of some tumors, this also being formed from the remnants of vacuolated cells.

So far, then, for the formation of secondary tumors. There can be little doubt that there is a true genetic relation between them and the primary growths. But what light does this throw upon the nature and origin of the latter? To clear up this, which, in truth, is the point of most importance both clinically and pathologically, Dr. Creighton points out that vacuolation is a natural process. The products of secretory glands are all probably formed by some such process taking place in the gland-cells themselves. The secreting cell becomes filled with its peculiar product by undergoing a process of vacuolation; and the product—be it mucus, milk-globule, or spermatozoon—is distinctly a new formation, differing from the primary protoplasmic contents of the parent cell. Should the process of cell-transformation be arrested (it may be naturally, as in the involution of the mammary gland) or perverted, the resulting products are different; the solid or protoplasmic part of the cell gives rise to new cell-forms, and in some such way a new heteroplastic growth—as cancer—may arise. Here we have, then, yet another example of morbid products resulting from perverted natural processes, and, we may add, one other link in the chain of evidence in favor of the local origin of cancer. There yet remains unsolved, however, the question as to the exciting cause of this change. Dr. Creighton proposes to follow up these researches with others bearing upon the development of mammary cancer, with special reference to the process of involution and evolution of the gland; and, when completed, they can not fail to be of the highest value, and are calculated to throw yet more light upon one of the most obscure points in pathology.—*London Lancet*.

The Criminal Class.—We have of late years come to look upon criminals as a special class of the community. We have come to complacently call them the "criminal class," just as we do the mercantile class or any other reputable order of men. This is so far true as to be capable of proof more by the exceptions than the rule. We have come to look upon crime as we do the typhus fever or the cholera, as prevailing mainly amid dirt and ignorance. I believe this to be true only so far as ignorance permits those good qualities

in men to be undeveloped which require culture for their development; and the existence of such qualities has not as yet been demonstrated. It must be understood that while the word "ignorance" does not express a positive quantity, it yet expresses a positive quality which is true of the mass of people. This word with perfect fairness may be applied to the vast numbers which swell the aggregate of a census-table, without any qualification. I believe it can be shown that it is simply from excess in numbers that the ignorant classes furnish the recruits to the ranks of crime, and not from any tendency to crime dependent upon the negative quality of ignorance. A careful analysis of facts in this field induces Mr. Buckle to say that "the existence of crime, according to a fixed and uniform scheme, is a fact more clearly attested than any other in the moral history of man." Another high authority may be quoted in evidence to prove that this scheme is exempt from those laws which govern intellectual development: "It is one of the plainest facts that neither the individuals nor the ages that have been most distinguished for intellectual achievements have been most distinguished for moral excellence, and that a high intellectual and material civilization has often co-existed with much depravity."—*From "Relations of Women to Crime," in Popular Science Monthly for November.*

On the Treatment of a Common Cold.—There are few ailments more commonly put before us for treatment than an ordinary cold. Of course they are most frequent in winter, but nevertheless they occur at all seasons, even in the burning days of July. Whenever and wherever they are met, they are the consequences of a chill, either to the general surface or to a portion of it. Ordinarily the body temperature is maintained by the equilibrium existing betwixt the internal heat-producing area and the external heat-losing area—the surface—according to Rosenthal. When excessive heat-loss is not met by increased heat-production, a chill or lowering of the body temperature is the consequence; or if heat-production has been great, as in a ball-room, for instance, the cutaneous vessels are dilated, and if the surface be suddenly exposed to cold these dilated vessels are apt to be paralyzed instead of incited to contract, and then heat is rapidly lost from the mass of warm blood in the cutaneous vessels. The catching cold, or the escape from doing so, depends upon the state of the vessels of the surface and their capacity to contract or the opposite. Consequently we can see that catching cold or escaping it under apparently identical circum-

stances depends upon a condition far removed from either vision or sensation. That the *modus operandi* of catching cold under these circumstances has afforded opportunity for difference of opinion, can be no matter for surprise. Rosenthal, however, has scientifically investigated the matter and unraveled the mystery. Where heat-loss is met by heat-production at the time, no unpleasant consequences result; but when the heat-regulating processes are delayed, the loss of heat and fall of temperature at the time are followed by an excessive heat-production, constituting a pyretic condition. This in its simplest form is recognized as a cold. Usually it is accompanied by some disturbance of the respiratory tract, either in the turbinated bones, known as nasal catarrh, as sore-throat, or as an attack of bronchitis. Of course these local inflammations may become very severe, and in bronchitis life is commonly threatened. There is at this point great vascularity of the internal heat-producing area, and a dry skin, whose heat-losing power is impaired from the loss of the aid of perspiration; for Leyden found that even the insensible perspiration is lost in increasing fever.

What are the indications furnished to us for the treatment of this state of matters? Obviously to restore the balance betwixt the two heat-producing and heat-losing areas; and in order to do so we resort to such measures as shall increase the amount of blood in the outer area, and so diminish the amount in the internal area; that is, to increase heat-loss and lessen heat-production.

The measures ordinarily resorted to for such ends are hot fluids, a warm bed, and often a dose of opium in some form. The result of such combination is the induction of perspiration, especially if the patient lie in bed next morning and have more hot fluids; for perspiration is most successfully induced from seven to nine in the morning. If the cold be caught at once by such measures the impending pyrexia may be averted, and the temperature equilibrium be maintained. More commonly, however, the case is more advanced when seen, and the pyrexia is clearly established. Under these circumstances the treatment will need to be more prolonged, and the restoration of the heat-balance will not be so readily attained. The condition of increased vascularity of the heat-producing area with arrested action of the skin is to be met by the administration of agents which possess the combined properties of lowering the heart's action and relaxing the vessels of the skin; or, in other words, which relax the two muscular ends of the circulation,

the central and the peripheral. The impression so made produces a diminution in the blood-current and a dilatation of the vessels of the heat-losing area. As a consequence of this there is less blood in the internal area and less heat-production, with cutaneous vascularity and increased heat-loss. Rarely, however, is any impression made upon the pyrexia until the action of the skin is excited and the cooling effects of exhalation attained. The administration of nauseant diaphoretics to attain these ends has been the rule amidst practitioners and housewives. The time-honored antimonial wine has scarcely yet yielded to its rival ipecacuan, nor, perhaps, is it desirable that it should. Their combination is good and to be recommended. In adults, iodide of potassium in guaiac mixture forms an excellent combination, especially when the cold is combined with rheumatic pains, or tonsillitis. These internal remedies may be aided in their action by external measures, such as warm baths. With children it is easy to wrap them up in a blanket wrung out of hot water, to inclose them so wrapped in a dry blanket, and to put them into bed. This may be repeated as required, and sufficiently aids the remedies given by the mouth. Measures for giving adults a warm bath in bed are now to be procured at little cost. After perspiration is once induced there is usually a gradual fall of temperature; but the normal may not be reached for some days. There is a decided tendency to excessive heat-loss after the action of the skin has been established, even though the temperature indoors be above the normal. Experience has taught humanity to wrap up well when passing through a cold, especially when it is breaking. Ere the action of the skin is re-established, the impression of external cold is grateful, but afterward chills are readily experienced. The increase of blood in the heat-losing area permits of rapid heat-loss. When a cold is caught during the restorative period it is usually a fixed one, and not rarely serious illness is the consequence.

When the action of the skin is re-established, it not uncommonly happens that perspiration is profuse, even while the patients wrapt up well to shield themselves from heat-loss. This is a troublesome stage in the history of a cold. Here mineral acids with vegetable tonics are indicated, and perhaps best of all, dilute phosphoric acid in cascarilla or cinchona. In the treatment of influenza, vegetable acids along with a bitter tonic often produce a decidedly good effect. In addition to the general effect of the tonic, the arrest of the excessive activity of the sudoriparous glands is desirable. This stage is sometimes a prolonged one, and the maintenance of a pyretic condition by the rapid loss of heat and then increased heat-production is not an uncommon event. If this condition be pronounced, the best line of treatment is that of quinine with an astringent mineral acid. Quinine is well known to possess an apyretic action, probably to some extent by its effects upon the nerve-centers, and more, according to the observations of Binz, upon its checking the ozonizing action of the blood. The effect of the astringent mineral acid upon the skin is to check secretion, and by these combined

measures a satisfactory restoration to the ordinary state of health is induced.

In the treatment of the bronchial affections which so commonly accompany an ordinary cold, it is not a matter of indifference what expectorant remedy is selected. As long as the skin is dry and the bronchial lining membrane tumid and secretion arrested, ipecacuan with acetate of ammonia is indicated, or a little antimony may be added with advantage. When the skin is once thrown into action and the bronchial secretion also established, then acid with syrup of squills are suitable measures. But it is not a successful plan to administer squill with acids until the skin is moist. When there is a tendency to the free action of the skin, this latter combination in full doses is a useful plan of treatment. Neither is the union of carbonate of ammonia and senega in severe cases indicated until the secretion alike of the skin and the bronchial lining membrane is thoroughly established.

The treatment of a cold consists really in hastening and abbreviating the ordinary process by which a rude disturbance of the temperature-balance of the body is recovered from. In order to do this, a fair comprehension of the natural processes must exist, so that the remedial measures may harmonize with and not contradict these natural processes.—J. MILNER FOTHERGILL, M.D., in *London Practitioner*.

Protoplasm.—The term protoplasm, from Greek *protos*, first, and *plasma*, form, is applied to the supposed original substance from which all living beings are developed, and which is the universal concomitant of every phenomenon of life. All that is comprehended for brevity under the term life, whether the growth of plants, the flight of birds, or a train of human thought, is thus supposed to be caused by corporeal organs, which either themselves consist of protoplasm, or have been developed out of it. Wherever nutrition and propagation, motion and sensation exist, there is as their material basis this substance designated in a general sense as protoplasm. The proof of it is held to be furnished by the protozoans called moners, the whole completely developed body of which consists solely of protoplasm. They are not only the simplest organisms with which we are acquainted, but also the simplest living beings we can conceive of as capable of existing; and though their entire body is but a single, formless, small lump of protoplasm, and (each molecule of it being like the other) without any combination of parts, yet they perform all the functions which in their entirety constitute in the most highly organized animals and plants what is comprehended in the idea of life, namely, sensation and motion, nutrition and propagation. By examining these moners we shall gain a clear conception of the nature of protoplasm, and understand the important biological questions connected with the theory.—PROF. HAECKEL, in *Popular Science Monthly for November*.

Correspondence.

OUR MEDICAL COLLEGES.

EDITOR LANCET AND OBSERVER:—Permit me to say a few words with respect to our medical colleges, as they are now opening for a preparation to graduate a very large number in a short time. I know there is a huge cry about the deficiency in the qualifications; but it seems everybody is leaving it for somebody else to break loose. In some colleges even in our own State the qualifications are so low that it is a shame to the profession. It is well known that very few who graduate know anything about Latin, much less about Greek, and barely know enough mathematics to reckon their board-bill, and yet are *doctors of medicine*. The fact is the profession has come down, and is coming down every year—so much so that it is the talk among those who are out of the profession. I can see no other remedy for this state of affairs than to petition the legislature to remove the evil. Let us have just such a condition as they propose to have in the State of Alabama. Let these college diplomas be disregarded, and a State board decide whether a man should practice or not in medicine. There is no use in trying to remedy this by preaching to the professors of the colleges; they fear they would lose their students. They don't see that good students go East to those colleges that have a high standard, and had our colleges as good a standing, such students would stay at home.

Hoping you will keep stirring this matter up until something is done, I am, very truly, yours,

STUDENT.

[We would be very sorry to indorse the opinions of our correspondent, as we are very positive that medical students are almost universally, at this time, receiving better and more thorough instruction than was ever given in the past. All the tendencies of the working and thinking elements of the profession are in the right direction. As to the granting of degrees by a State board of examiners, instead of by the legalized colleges, we think our correspondent is probably right in his views, though much may be said in advocacy of the present plan.—ED.]

Editorial.

We clip the following from the *Cincinnati Gazette* of October 7, 1875. It was under the head of Newport news:

"A Case of Courtesy.—Suit was brought at the present term of the circuit court, by Dr. S. L. Bennett, for \$240, on a bill for medical services claimed to be rendered Rev. F. L. Senour, while the latter was pastor of the Second Presbyterian Church in this city, the time in which the services were performed extending over nine months. The defense claimed that the services of Dr. Bennett had been offered free, in consideration of the benefit the medical gentleman would derive in the way of getting introduced into acquaintance and a practice, as he was but newly arrived in Newport; further, that the services were given in lieu of paying his quota of the minister's salary; that a physician in good standing, who was giving entire satisfaction, was dismissed to make room for Dr. Bennett; and that, in addition to the virtual contract above mentioned, it was a courtesy usually shown by the medical toward the clerical profession to give its services gratis, and that no bill was presented until Mr. Senour left Newport for his present charge.

"The jury rendered a verdict yesterday for the defendant. The case has excited considerable attention. John S. Ducker, Esq., represented the plaintiff, and Messrs. E. W. Hawkins and O. W. Root, the defendant."

After reading the above, we were not at all surprised at the action of the medical profession in "Oldham and adjoining counties in Kentucky," published in our last issue. The gratuitous attendance of physicians on the clergy has, at various times, attracted attention and been discussed in medical societies and journals; both sides of the question being ably and judiciously stated.

The time has been when the clergy were very poorly paid, and their calling one of great sacrifice and hardship, and whatever remuneration they received in the way of pay was tendered in the shape of produce that had but little market value. Under such circumstances, it became customary for physicians to give their pastor gratuitous services, just as the farmer gave his hay, oats, and potatoes, with this exception, that the physician was expected to pay his subscription toward the support of the minister, in addition to his services, while the farmer received credit for produce deliv-

ered at the highest market rates. Such was the prevailing custom, from thirty to fifty years ago, in many parts of this country.

Times and corresponding circumstances have generally changed since that period, and we find, in carefully looking over the various learned professions in this city, and making careful inquiries of members of each, that the Protestant ministry are generally better paid, actually receiving more remuneration, per capita, than members of either the medical or legal profession. In rare instances we have heard of physicians presenting a bill for services rendered. In one such case a physician had been in attendance night and day, for some months, on the wife of a prominent clergyman receiving a liberal salary as pastor of a wealthy church. When making out other bills, one was made out for the aforesaid clergymen, and sent to him through the mail. In answer he said he had never been more insulted in his life than by the presentation of this bill for services rendered his deceased wife; that such services were due to every minister of the gospel by any physician they chose to call upon. In this case the physician was not a member of the pastor's church. In such a case we have no hesitation in saying that such a minister has no right whatever to expect a gratuitous service from a physician who may be a member of his own particular parish. In another instance we know of one gentleman, a pastor of a prominent church in this city, who stated that he would never again employ a physician who was a member of his church, and although he had received the gratuitous services of a prominent physician, a member of his parish for some years, he dismissed him without apparent cause, pay, or expression of gratitude, and now employs, but, we believe, does not pay, another man. In another case the pastor of a prominent church was so unfortunate as to be possessed of an invalid wife, and during a period of two years that wife received the unremitting attention of a physician, a member of his church, whose services were very frequently called for at night, often furnishing his own medicines, and on a single night, as he told us, as much as five dollars' worth. During one of those years that pastor received \$4,200 salary, and the other, \$3,600, which should have been sufficient to pay all his family expenses, including a reasonable bill for physician's services. In return for the services mentioned, the physician received instead, severe censure from a member of the family, and never one word of thanks or expression of gratitude, nor was there any reduction of pew-rent placed to the doctor's account.

Now, we believe this to be a wrong state of affairs. Ministers should be treated by physicians, professionally, just the same as they treat any other person. If the minister is a poor man, with a small salary, scarcely keeping body and soul together, or even more than that, able to live, but obliged to use economy by reason of small support, let us give them our services gratuitously, and that cheerfully and heartily, lightening their burdens as best we can—just as we would any other poor and deserving family, not even expecting an indirect reward; but, on the contrary, where ministers are receiving a good salary, and able to go on a two to four months' vacation for pleasure and recreation every year, and a' that, we can see no reason why they should not be required to pay their doctor's bill as well as any other man. Any other course is demoralizing to both parties.

The regular medical profession should also consider what we believe to be another fact in the case. No other class of persons have ever done so much to promote the interests of quackery as the clergy. Time and again have we heard them advocate the remarkable powers of infinitesimal doses, and of the evil effects of mercurials, in any form, on the human system. Pick up almost any patent medicine almanac, and you will find the virtues of patent pills and potions eulogized, *ad nauseum*, by reverends and D.D.'s. Take up almost any religious newspaper (there are two or three honorable exceptions), and you will generally find about two-thirds of their advertising patronage made up of quack nostrums. Recently, our sense of respect for the official paper of our own church was very considerably damaged by seeing a quack advertisement, occupying five columns of space, alongside of the Sabbath-school lesson. The following are special editorial notices in the same issue of that paper:

"We take pleasure in referring to the advertisement of Dr. A. H., of Newport, Kentucky. The price of one dollar for five valuable recipes is surely very low; and as the doctor is a fine chemist, and highly recommended, the people may have full confidence."

"The advertisement, in another column, of the 'Illinois Medical Infirmary,' appears every other week. This infirmary, which is located at Charleston, Illinois, is worthy of the confidence of the afflicted. It is the oldest institution of the kind west of New York, and keeps up with the times. It has all the modern appliances that have been proved efficient in the treatment of the various diseases prevalent in this country, and its physicians are of the highest standing."

This paper is noted for the radical views expressed by it on the temperance question, yet for years it has kept in its columns an advertisement of the remarkable virtues contained in Hostetter's bit-ters, which the editors know to contain forty-five per cent. of alcohol, and little else besides water. The editorial staff of that paper is composed of four ministers, three of them D.D.'s, and one a lawyer.

We know and are glad to believe that there are very many clergymen who are strictly correct in their views of medicine and in their treatment of physicians, and to such we accord all honor and praise; but when it comes to the point of refusing to pay for medical services, called for and rendered at all hours, day and night, and furnishing medicines, we are inclined to think that that man has mistaken his calling, and has certainly forgotten, if he ever knew, that the Master, who was the greatest of all physicians, taught his disciples to "Render therefore unto Cæsar the things that are Cæsar's." The *demanding* such services *as a courtesy*, by the medical to the clerical profession, is too much for our sense of justice and right. Some of the basest and meanest acts of ingratitude that we have ever known have been at the hands of clergymen and their families toward their medical attendants.

As we see in this case of Dr. Bennett and Rev. Senour, there seemed to be no hesitancy about discharging "a physician in good standing, who was giving entire satisfaction," and that without any apparent excuse. Had this physician in good standing no feelings to consider, that he should be treated in this dishonorable manner, or was there an idea in Mr. Senour's family that a new physician would be more subservient to their whims than the man who, by their own statement, had given entire satisfaction? Such conduct was, oh, so honorable; it must commend itself to every clergyman throughout the land, and it will certainly have such a tendency in causing every disciple of Æsculapius to jump with joy when he is aroused at the midnight hour, and impressively told that the minister's baby has the colic, and its mother wants to know whether she would be doing right in giving the hopeful more than one teaspoonful of catnip tea every hour, and, anyhow, she would be very glad if he would just come over, as she is really afraid the child will have spasms.

Physicians are no more in duty bound to gratuitously give their professional services to a clergyman than the farmer to give of the first fruits of his crop, the merchant the choicest of his goods, or

the mechanic his most skillful labor. As a rule, a physician should make up his mind as to the amount he purposes to give toward the support of his pastor, and pay that amount promptly when due. If his services are called for by his pastor, let him make out his bill just as he would do for any other person in similar financial circumstances.

We can not but think that the people, as a whole, have done much toward destroying the independence and individual manhood of the clergy by a system of regular and irregular gifts, presents, donations, and other subterfuges that are too often intended to help make up the pastor's salary, and a gratuitous medical attendant is generally looked upon as part and parcel of that kind of business. This is all wrong. What man in any other calling ever expects, or ever receives, such benefactions from his neighbors? On the surface it seems to be very nice, and that the aforesaid people are doing a good and generous thing, but what man in any other business would care to depend on so precarious a mode of subsistence? And is not the minister's self-respect lowered when he accepts of an article as a present, the cash value of which should be honestly paid him through the church treasurer, and he not obliged to be made to feel under special obligations to Mr. W. B. Nabob? This system has begotten such a looseness of financial management and frequent neglect of the commonest rules of plain dealing, on the part of many otherwise good men in the ministry, that their usefulness has been blighted and the church dishonored by their conduct. We believe that physicians are as much to blame in this matter as any other class, probably more, as too often it has been supposed that one of the best means of obtaining the patronage of the better classes, was through the clergyman's sick room; in other words, degrading him to the position of an advertising medium.

Collection to illustrate the Ethnology of the United States.—The Smithsonian Institution desires to secure as complete a collection as possible to illustrate the ethnology of the United States at the International Exhibition to be held at Philadelphia in the centennial year of 1876. This will form part of a governmental display, to be made in accordance with the act of Congress of March 3, 1875, and the executive order of March 5, 1875.

The object of the collection is to exhibit as complete a series as possible of everything tending to illustrate the past and present history of the aboriginal races now or previously inhabiting the

continent of North America, thus including both what is strictly pre-historic in its character or relating to a long-past age, and what belongs to the present day.

For this purpose the institution solicits from its friends and correspondents, and all interested in the completeness of the display, whatever specimens they can furnish in the way of objects of stone, bone, earthenware, etc., to include such article as axes, chisels, fleshers, knives, hammers, pestles, mortars, scrapers, smoothers, polishers, sinkers, spindles, pipes, tubes, vessels, or vases of earthenware or soapstone, both entire or fragmentary.

The modern objects required are articles of dress, ornament, and the toilet, implements of war and the chase, huts, wigwams, sleds, boats, dog and horse trappings, agricultural implements—in short, everything that tends to throw light upon the manners and customs of the American tribes. Skulls and skeletons, both ancient and modern, will be acceptable, as also photographic portraits of modern races.

All specimens should, as far as possible, be accompanied by an invoice and a statement of the circumstances under which they were collected, whether in a mound, a grave, or found on the surface, with the exact locality, collector, etc.

The collections thus obtained will, after they have served their purpose of exhibition at the Centennial, be brought back to Washington and form part of the permanent exhibition at the National Museum, where, as in Philadelphia, due credit will be given to the contributors.

Information is invited in regard to collections of specimens of this kind in possession of private individuals or public institutions, to include, if possible, photographs and outline drawings of the articles which are considered most interesting and remarkable. The institution may possibly desire to ask the privilege of borrowing, for the occasion in question, such specimens as the owners are not willing to part with.

The specimens may be sent by express or mail, or, if in any large bulk, by railroad conveyance, and their transportation will be paid for on their receipt in Washington, to which place they should be forwarded, addressed to the Smithsonian Institution.

More detailed instructions for collecting ethnological specimens will be sent on application to the institution, as also a pamphlet containing a classification of the principal objects that go to form part of the ethnological collection in question

The display in question will be exhibited under the joint auspices of the Smithsonian Institution and of the Indian Bureau of the Interior Department, both departments being engaged in making collections for a common object.

JOSEPH HENRY,
Secretary Smithsonian Institution.

The September number of the Chicago Medical Journal and Examiner is out as the official organ of the Chicago Medical Press Association, with Dr. William H. Byford, A.M., M.D., editor, and Drs. J. H. Etheridge, Norman Bridge, J. N. Hyde, F. C. Hotz, associate editors. Such an editorial staff is a sufficient guaranty of the continued success of the *Chicago Journal and Examiner*. Dr. Byford has long been one of the most practical writers in the medical profession in this country, and is equally well known as a successful teacher. Most gladly do we welcome both him and his associates to the editorial ranks. In the retirement of the veterans, Drs. J. A. Allen and N. S. Davis, the medical press loses not only two of their oldest members, but two of their number that have exerted a large influence in giving a high character to medical literature, and to the advancement of true science. Their work has been well done, and it is a privilege well deserved to enjoy a partial rest from their labors.

The various medical societies are again assuming their usual activity. Live men make live societies, and wherever we hear of a medical society that is well attended, and whose members frequently read and discuss papers that have cost their authors a large amount of labor and study in their preparation, we know that the men who constitute that society are fully abreast of the times. They obtain the latest medical books in some special department of medicine, and take at least two, three, or more medical journals. The man that is a good observer and reads, is the man that is looked to for information by his fellows in the profession. The time has passed by when any man can be regarded as a respectable practitioner that does not regularly read, and be able to tell of the latest discovery in medicine and surgery.

The new amphitheater erected for the purpose of giving clinical lectures in the Good Samaritan Hospital, has been completed, and was formally opened the 1st of October, by the faculty of the Ohio

Medical College, who largely constitute the staff of the hospital. The building is most admirably adapted to the purpose for which it was constructed; the room is perfectly flooded with light, and the arrangement of seats all that could be desired. In the whole structure there seemed to be but one real defect, and that was the single, narrow, and crooked means of access. In case of a fire, with a room full of students, the result could not but be appalling. Of course, this condition of affairs will be remedied; we could not but feel that the sooner it is done the better.

Can such things be? The article published in this number of the LANCET AND OBSERVER, by J. A. Kimmel, indicates a condition of affairs in one of our most respected and prosperous medical colleges that we are scarcely prepared to credit. If there is a belief in the minds of members of the profession away from here, that degress are granted in the loose manner stated, and that belief is unfounded, the faculty of the Ohio college should lose no time in correcting those opinions. On the other hand, if the statements are true, the sooner daylight shines through them the better, and we say the same of any other college.

The prospectus of *The Medical Student* is on our table. It is to be a medical monthly of thirty-two pages reading-matter. Edited and published by James E. Reeves, M.D., of Wheeling, West Virginia. Dr. Reeves is a writer of experience and ability, and, we doubt not, will furnish his subscribers a journal worthy of their patronage. The annual reports of the West Virginia State Medical Society are good evidence that the physicians of that State are live men. The first number of the *Medical Student* will be issued November 1st.

Don't neglect to send the name of one new subscriber, with your own, for the LANCET AND OBSERVER for the year 1876, with \$3.00 for each, thus obtaining one of the cheapest medical journals published.

Dr. W. Clendenin, professor of anatomy in the Miami Medical College, has opened a private school for special instruction in anatomy, especially what may be termed medical anatomy, as applied to the living subject.

Dr. Charles A. Lathrop, of Lyons, Iowa, is engaged in making a complete directory of the physicians of that State. In this laudable work he should receive the practical encouragement of every physician in Iowa. For many purposes the *Medical Register and Directory of the United States*, published by Dr. S. W. Butler, has proven to be invaluable. Later works of the same kind, revised and corrected, will be correspondingly valuable.

Both the Miami and Ohio Medical Colleges have made valuable improvements in the way of adding increased facilities to their practical, demonstrative departments. This is well, for the methods of giving instruction to medical students have not only greatly improved within the past few years, but are even now advancing with rapid strides beyond anything attempted or conceived of by ye old time professor.

The Philadelphia Medical Times has become a bi-weekly of twenty-four pages, at \$4.00 per annum. We think the publishers have done wisely in placing the name of the editor, Horatio C. Wood, M.D., on the cover. Dr. Wood is a careful and industrious investigator in the broad domain of medical science, as well as one of the ablest writers connected with the medical press.

One old and one new subscriber to the LANCET AND OBSERVER for 1876, \$6.00. A large subscription list will enable us to furnish the large amount of matter that is proposed at this low rate.

The classes in each of the medical colleges in this city are larger than they were at this time last year. Continued prosperity seems to await them.

An elegant new building for use of the medical department of the New York University, has been completed in time for occupancy by the present medical class.

Married.—At Brooklyn, N. Y., September 30, 1875, Dr. Milo A. Wilson, formerly of Cincinnati, to Miss Ada Canda.

Died.—August 29, 1875, at Freeport, Harrison county, Ohio, from injuries received by being thrown from his carriage, J. Sydenham Baily, M.D., a graduate of the Miami Medical College, class of 1857.

Dr. Max Heller, formerly of Cincinnati, died in Philadelphia, September 26, 1875.

The Indiana Journal of Medicine, edited by Thad. M. Stevens, M.D., and published at Indianapolis, has been consolidated with the CINCINNATI LANCET AND OBSERVER, Dr. Stevens accepting the position of assistant editor of the latter journal. The LANCET AND OBSERVER will be sent to all subscribers for the *Indiana Journal of Medicine* during the remainder of the year for which they have paid for that journal. Dr. Stevens will especially represent the interests of the medical profession in Indiana through the pages of this journal. C.

In consolidating the *Indiana Journal of Medicine* with the LANCET AND OBSERVER, we have but to say that we found the exclusive editorial control of the *Journal* occupying more of our time than we had to spare for that purpose, and, what was of more importance, our health demanded attention at a time when the *Journal* compelled labor.

During the five years and a half that we have conducted it, we can not complain as to the patronage of the profession. Now and then, perhaps not often enough, the shortcomings of the *Journal* have been freely criticised, which, when not in the spirit of carping jealousy, we did not object to. As to contributions, we have received sufficient encouragement, not that all have assisted us as they might, but the majority have not refused their aid. We only hope that all arrangements connected with the control and finances of the *Journal*, shall leave us free hereafter to act with energy in the interests of the profession.

As to the need of a "home" journal in Indianapolis, we have to say that while State pride, etc., led to the establishment of the *Indiana Journal of Medicine* in 1870, still we consider that we can work for the profession with better success by a connection with an old and established journal. Whether it will be as well for our own *private purposes*, we doubt. The thought that we have made sacrifices for the profession we love, during the past years, gives us more real satisfaction than all the money repaid or time restored could possibly do. The future of journalism with us will not, we trust, be dimmed by anything in the past. Our usefulness, we hope, will be increased.

It will be our effort to assist in making the LANCET AND OBSERVER second to none of the monthly journals, and we trust we shall have the co-operation of the profession of Indiana to the same end.

All subscribers to the *Indiana Journal of Medicine* will be sup-

plied with the LANCET AND OBSERVER up to May 1, 1876, and all those who have favored us with advertisements will find them inserted here for the time contracted for.

Without a word of farewell (for we are still with you), but with a cheer for the future, we may be considered as *united* but not *absorbed*.

THAD. M. STEVENS.

INDIANAPOLIS, *October, 1875.*

The services of Drs. T. C. Minor and H. Illoway have been secured as co-workers on the LANCET AND OBSERVER. Their special province will be to keep our readers fully posted in the advances made in medical science in Europe. These gentlemen are both skillful translators, and know what is necessary to the make-up of a first-class medical journal.

This does not mean that anything shall take the place of acceptable contributions from other sources. Such are always welcomed and desired. Our aim will be to publish the best, largest, and cheapest medical journal that is possible at the announced subscription price.

The Scientific Monthly, "A magazine devoted to the Natural Sciences," Vol. I., No. 1, E. H. Fitch, editor and proprietor, Toledo, Ohio, October, 1875.

This new candidate for public favor is on our table. The editor, in his introduction, says: "No one can pursue this varied and inexhaustible field (natural science) without being convinced of a great and benign Head and Creator, who controls and protects the whole, and being filled with awe and love for One who is at once so powerful and wise." From which we would infer that the editor does not look upon the natural sciences as in antagonism with the teachings of the Bible. There is a wide field open to a first-class magazine of this character. This number contains some excellent papers, one of which, by W. C. Chapman, M.D., of Toledo, on the "Influence of Climate in the Distribution of Disease," is of special interest to physicians. The subscription rate is \$3 per annum. All communications should be addressed to the editor at Toledo, Ohio.

After December, 1875, the LANCET AND OBSERVER will contain ninety-six pages of reading-matter each month.

Reviews and Notices.

Eighth Annual Report of the Board of Health of the City of Cincinnati. For the year ending December 31, 1874. J. J. QUINN, M.D., Health Officer.

There are some things in this report that deserve the practical attention of the city authorities—as the establishment of an abattoir, that would localize the slaughtering of animals for city use. The location of slaughter-houses in a densely populated part of the city, as seen in the neighborhood of John and Findlay streets, can not but be a public nuisance, and a common cause of disease among those who reside in that vicinity. As to the odors of that locality, their offense is rank and smells to heaven.

The indigent sick who are treated in their own homes, are cared for professionally by physicians appointed by the board of health, one of whom resides in each ward. These twenty-five physicians were paid during the year, salaries to the amount of \$8,375, while we find in the very next item, \$15,012.23 paid for medicines. Now, it seems to us that either the doctor's salaries were extremely low or the drug-bill extremely high. The city has a regular apothecary's establishment in the city hospital, with a well-qualified pharmacist in charge. Why can not the indigent sick obtain their medicines there, in place of the most convenient drug-store? People in affluent circumstances, in and around the city, are willing, and do go distances of from one to eight miles, in order to obtain the services of their favorite physician, and think it no hardship to go a long distance to some particular drug-store to obtain their medicines. Such being the custom of the class of people that pay for what they obtain, it certainly would not be asking too much of those who obtain their medicines free, that they be required to go where the city would be able to furnish what they need at the least cost to tax-payers. Were such a plan put in operation, and we believe it to be perfectly practicable, as the hospital is admirably located for such a purpose, in the very center of the city, a result would be a large saving to the city. The class of patients known as walking cases, might with advantage be prescribed for at this central dispensary.

The vital statistics embodied in the report are valuable, the only defect being in the table of birth returns, which is accounted for by reason of the large number of women who are attended by midwives, nurses, and other women, who either do not know that the law requires them to make a return of births to the health office, or knowing, willfully violate its instruction.

A subject that should receive the attention of the board of health, is the dumping of street-sweepings, garbage, and filth of all kinds and descriptions in low grounds within the city limits, and in fills where the grade of the streets are being raised, as in Effluent-pipe street, East Court, and Eggleston avenue, in the eastern part of the city. Made soil of this character can not but be detrimental to the health of those who live in those localities. A number of streets in other portions of the city are being raised to a proper grade with the same kind of material. We earnestly protest against the use of street cleanings and garbage for such purposes, as it is a well-established fact that there is no more prolific source of disease than an impure soil that is porous and constantly exhaling foul and noisome odors. It may be a seeming convenience and economy to dispose of the accumulations of filth in the manner now pursued, but there is no doubt as to its fearful cost, in sickness and death, in the end.

Altogether, the report is a good one, being very full and complete.

Paralysis from Brain Disease in its Common Forms. By H. CHARLTON BASTIAN, M.A., M.D., F.R.S., etc. New York: D. Appleton & Co. For sale by Robert Clarke & Co.

This volume consists of a course of lectures delivered in University College Hospital, during the year 1874, and which were published at the time in *The Lancet*. Since then they have been revised, and are now offered to the profession in the more permanent form of a book. The subject is one of great practical interest to every practitioner, as every year there is undoubtedly a general increase of tendency to nervous disorders, and paralysis from brain disease has become a not infrequent affection.

The author systematically takes up, in his first lecture, the causation of hemiplegia, which he tabulates as follows :

1. Rupture of blood-vessels. $\left\{ \begin{array}{l} a, \text{ on the surface} \\ \quad \text{of the brain.} \\ b, \text{ into its sub-} \\ \quad \text{stance.} \end{array} \right\} \text{Hemorrhage.}$

2. Occlusion of vessels. $\left\{ \begin{array}{l} a, \text{ thrombosis.} \\ b, \text{ embolism.} \end{array} \right\}$ Softening.
3. Spasm of vessels and functional disturbance.
4. Fibroid indurations of portions of the brain.
5. Tumors of brain and its meninges, including acephalocysts.
6. Abscesses.
7. Traumatic injuries and their sequences (meningitis, etc.)
8. Congenital atrophy.

Lecture II. is devoted to the consideration of the influence of heredity in favoring hemiplegia, in the discussion of which he says: "There is one condition of the body especially with which this affection is very apt to be associated, and that is chronic Bright's disease." The symptomatology following the various lesions of the brain, is carefully described and illustrated with clinical cases; and what adds very greatly to the value of the book, all parts of the brain are excellently illustrated by cuts. The work is a good one, very carefully prepared, tersely treating a very important and grave affection, making the reader acquainted with the most recent investigations in the pathology of brain diseases.

The book is eminently practical, devoid of superfluous language, and full of useful information. It is truly the work of a master in his profession.

Clinical Lectures and Essays. By Sir JAMES PAGET, Bart. F.R.S., D.C.L. Oxon., LL.D. Cantab, etc. Edited by Howard Marsh, F.R.C.S. New York: D. Appleton & Co. For sale by Robert Clarke & Co.

The greater part of the contents of this book have been already published, either in medical journals or in hospital reports, which, however, renders them none the less valuable now that they appear in more permanent book form. The first part of the work is devoted to the various risks attending surgical operations, as erysipelas, shock, constitutional taint, and ill-health from various causes. Then there are lectures on cases that bone-setters cure, strangulated hernia, chronic pyæmia, and nervous mimicry. On the latter subject he says: "Cases of this kind are commonly included under the name hysteria, but in many of them it is desirable that this name should be abolished, for it is absurdly derived, and, being often used as a term of reproach, is worse than absurd,"—going on to say that, as a name, hysteria should be banished from surgery; such patients suffer from extreme nervous sensibility. The lecture on sexual hypochondriasis is full of good common sense, and on a subject that is too

often utterly ignored by teachers of medicine and surgery, who apparently turn the subject over to advertising quacks, the discussion of which is supposed to be more in accordance with their tastes.

Transactions of the Ninth Annual Meeting of the Medical Association of the State of Missouri. Held at Jefferson City, Mo., April 20 and 21, 1875.

These Transactions contain a number of really valuable papers, among others one by J. W. Trader, M.D., of Sedalia, Mo., on anæsthesia and anæsthetics, which is a very good summary of the literature of the subject. In speaking of Nelaton's method of resuscitation, he says: "I do not know that anæmia of the brain does always exist in chloroform narcosis. The idea that seems to have obtained pretty generally throughout the country, is that Nelaton first introduced this method of resuscitation in chloroform narcosis, believing that cerebral anæmia was the chief or only cause of death. No such plan or theory was prevalent in Paris in 1867. Our last experiments in physiology give us no intimation of such a state. Whenever the brain has been seen, when under the influence of anæsthetics, its vessels have seemed to be full of black blood."

The paper, "On the Use of Anæsthetics in Labor," by S. S. Todd, M.D., is very full and complete, embodying the opinions of nearly all the obstetricians in this country and England on this important subject.

A Manual of Diet in Health and Disease. By THOMAS KING CHAMBERS, M.D., Oxon., F.R.C.P., London. Philadelphia: Henry C. Lea. For sale by Robert Clarke & Co. Price, \$2.75.

There is no subject of more interest to both the physician and his patrons than the subject of dietetics, and very naturally our author begins his subject by the pertinent inquiry, "what is the natural food of man?"—assuming that man can easily accommodate himself to a varied and mixed diet; that he has, as a matter of fact, accommodated himself to it; and that, therefore, it will in future, as in the past, best suit his requirements.

As to the choice of food, all articles should be the best of their kind, and if economy is necessary, let it be practiced in quantity and not in quality, is a rule that will receive the sanction of all sanitarians. The character and description of the proper appearance of all kinds of meats are given in language that any one can easily comprehend. The time for eating fruit is designated as in the

morning or afternoon, and the worse time is after a heavy dinner. The various characters of teas, coffees, chocolate, sugars, spices, and in fact everything that is used as food, is described with its various uses, and the best methods of preparation and times for their uses, making the book an exceedingly valuable one for purposes of reference. The chapters on digestion and nutrition are a *résumé* of what may be found in the most recent works on physiology. The dietetic habits of noted literary workers are given, with comments on the effects of those habits on their mental labors. The particular kind of diet that is most suitable in various diseases is given by the author with a great deal of care. The book is of real value, and we would especially commend it to young practitioners, as it contains much information that they could only obtain through reading such a work, or from a large personal experience.

Cholera Epidemic of 1873, in the United States. Washington, 1875.

By a resolution passed by the Forty-third Congress, an inquiry was ordered on the "causes of the cholera," that raged as an epidemic in the Mississippi Valley, during the year 1873. To the supervising surgeon of the Marine Hospital, Dr. John M. Woodworth, and to Assistant-Surgeon Ely McClellan, U.S.A., the task of collecting facts and statistics bearing on this special subject was assigned; also the elucidation of that most perplexing problem, the "cause" of cholera epidemic. An interesting report of over one thousand pages is the result of their labor. This report is divided into three parts: 1. History of the Cholera Epidemic in the United States in 1873, by Dr. McClellan; 2. History of the Travels of Asiatic Cholera, by Dr. John Peters and Dr. McClellan; 3. Bibliography of Cholera, by Dr. John Billings, U.S.A. Part first takes up some five hundred and thirteen pages, consisting, for the most part, of *reprints* of papers long since published in the Transactions of the American Public Health Association, health office reports, and various medical periodicals. It contains but little new information regarding the epidemic of 1873. It is valuable, however, for the reason that these papers are condensed and for the first time collected under one roof, and thus made convenient for ready reference. The compiler deserves much credit for the faultless manner in which he has arranged his material. Part second contains the interesting, though rather antiquated *reprint* of Dr. Peters' very readable paper on the travels of Asiatic cholera in Asia and Europe. This is followed by a history of the disease in

North America, by Dr. McClellan—the latter a most ably written and elaborate paper. Part third is the bibliography of cholera, by Dr. Billings. The amount of care and labor bestowed on this part of the work is remarkable, and we congratulate the author no having arranged the most complete bibliographical monograph on the subject of cholera, extant. This part of the work deserves a separate reprint, as it is the crown jewel of the collection, and by far the most valuable part of the book, as it is new, most of the other matter having been previously published.

So much for the report. The natural query now arises, what *reliable* conclusions have the “investigating commission” arrived at, regarding the “causes of the cholera?” This query may be answered by saying, absolutely none. The work is a *complete failure*, as far as it goes, in showing “the causes inducing” the cholera epidemic of 1873.

The “commission” unfortunately seem to have started out with the *preconceived idea* that the disease was *imported* into the United States by way of New Orleans. They have *utterly failed* in adducing the slightest proof of this. The truly careful and thorough investigation of this point, made by the President of the New Orleans Board of Health, that most distinguished sanitarian, Dr. C. B. White, *conclusively proved* that such was not the case. The statement of *facts* made by this gentleman and his medical associates of the Louisiana Board of Health, *sustained*, as it is, by the *entire medical profession* of New Orleans, overthrows completely the *preconceived theories* of those gentlemen, who were not on the ground during the time of the epidemic. That the disease had its starting-point at New Orleans, and from thence spread up through the Mississippi Valley, had been amply demonstrated before the “commission” started out on its labors. The able paper of Dr. Judson, of the New York Board of Health, read before the Public Health Association in 1874, made this point perfectly clear. It was a strange oversight on the part of the compilers of this report, that Judson’s able report and chart, showing the geographical distribution of the disease, has been omitted. The attempt made to prove the introduction of the disease at various points in the Mississippi Valley, by persons from infected districts, not only of this country, but of Europe, is also a failure. The *circumstantial evidence*, on which such a conclusion is based, is more than outweighed by the obstinate array of *facts* offered on the other hand. It is to be regretted that under cover of sweet-sounding compliments, attempts

have been made to disparage the statements of well-known sanitary scientists, and students of epidemiology, who rank much higher in the special department of sanitary hygiene than those gentlemen composing the investigating commission. We shall mention but a single instance, as it has here (Cincinnati) a *local* interest. Dr. Quinn, on all hands acknowledged to be one of the *ablest* health officers in the United States, published an elaborate report on the cholera epidemic in this city. This report shows conclusively that the first case of cholera occurring in this city had been in *no manner* whatever *exposed* to the disease, either directly or indirectly. It seems, in order to carry out the *preconceived theory* that the disease is communicated only by direct contact with persons from infected districts or infected clothing, that the commission found it necessary to try and overturn the plain, unvarnished facts presented by Dr. Quinn. So the commission have printed a communication from a second party, trying to show that cholera was introduced into Cincinnati by rail and boat communication with infected parts. The *circumstantial* evidence offered by the second party, an ex-health official, is demolished completely by the *facts* presented by Dr. Quinn. We can only state at this point that Dr. Quinn's views regarding the disease in Cincinnati (like Dr. White's views regarding the disease in New Orleans) are sustained by the majority of the *regular* medical profession of that city. A point on which much stress is placed is the following: A family of Hollanders, immigrants of only five days' standing, arrived at Carthage, a suburb near the corporation line of the city of Cincinnati. This family was attacked by cholera, and most of its members died. A ridiculous attempt is made to show that these immigrants were *infected* in Europe. These immigrants *arrived in Cincinnati during the prevalence of the epidemic*. A few days afterward they were attacked by the disease. Unacclimated, living in a notoriously unhealthy neighborhood, and in close proximity to the city *where the disease was epidemic*, it is not the least surprising that they should be the very ones attacked. There is not the least atom of proof that they contracted the disease from *imported* cholera germs. The same may be said of the outbreak of cholera among Russian immigrants to Dakota territory. The same claim is made that they *imported* the germs from Russia. As they passed through either St. Louis or Chicago on their way west, they were doubtless *exposed to the disease at infected points*, taking the "commission's" own unproved theory to back the assertion. It is impossible in this short review

to cover much of the ground taken by the report. We leave the task of "handling" the commission to those sanitarians who are personally interested in the conflict of opinions regarding the cholera epidemic of 1873. That the report is open to criticism is patent to the most careless observer. As for ourselves, we are willing to accept the idea that cholera is indigenous to the United States. Deaths from the disease, in its sporadic form, are reported every year. It needs no importation from India or Europe. It is already here. The views held by Dr. Farr, Registrar-General of Great Britain, and also by the distinguished English clinician, Dr. Aitken, regarding the acclimatation of the disease in Great Britain, will apply equally well to the United States. Says Aitken, in his "Practice:" "Cholera is now indigenous in this country (England), and it is but an aggravated form of a disease, whose germs, or material for propagation, *are continually* present amongst us, its epidemic tendency appearing to depend chiefly on local and meteorological circumstances."

T. C. M.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. VON ZIEMSEN. Vol. X. Diseases of the Female Sexual Organs. By PROFESSOR CARL SCHROEDER, of Erlangen, Bavaria. New York: William Wood & Co.

This volume, unlike its predecessors, has but one author. In him we recognize a master in the treatment of his subject. The study of and consequent advances made in gynecology, have been almost exclusively confined to the present century. The author at once begins with a description of the various postures to be assumed in making a gynecological examination, stating the various advantages pertaining to each for special purposes; but with the exception of cases in which Sims' speculum is used, he nearly always prefers the dorsal, as having very many advantages over the lateral. Of examinations per rectum, he says: "That in all kinds of retro-uterine tumors, the exploration by the rectum is unequaled in value by any other method. Tumors of tolerably large size are frequently discovered only by means of this method of manipulation." The various methods of making a proper examination are most admirably illustrated by wood-cuts.

A subject that has always seemed to us very much more easily described than practiced, has been the introduction of sponge-tents. The method pursued by Professor Schroeder *seems* to make of it a very simple and easy operation. He says: "With a little dexterity

the sponge-tent may also be readily introduced with the hand, underneath the bed-clothes. For this purpose we place the left index finger against the cervix, and push the tent along the finger into the vagina; the finger guides it into the external os, and if the position of the body of the uterus has been previously ascertained, and the base of the tent is pushed correspondingly backward or forward, as the case may be, it can be passed without trouble through the internal os. The other hand gives material aid by pressing the uterus down against the tent from without. The point only should be smeared with solid fat (not oil), and introduced rapidly." The length of time it should be allowed to remain, to depend entirely on individual circumstances.

The various malformations of the uterus are well described and finely illustrated. The pathological anatomy of the different conditions is especially full and complete. The various operations for the radical cure of displacements of the uterus, and for hypertrophy of that organ, are very well and simply described. What adds very greatly to the value of the volume is the abundance of its very fine and large-sized illustrations.

Transactions of the College of Physicians. Third series. Vol. I.

The first paper published in this volume is a very complete report of an autopsy on the bodies of Chang and Eng, the Siamese twins, by Harrison Allen, M.D., which also embraces a sketch of their ante-mortem history, with which our readers are all familiar. The autopsy developed a condition of affairs in the wonderful union of these two persons, that set at rest the fact that they could not have been separated, at least after childhood, without fatal results. The anatomy of the parts is very finely illustrated with large-sized wood-cuts.

The next paper is a report of a case of adenoid (Hodgkin's) disease, by James H. Hutchinson, M.D., giving a very careful statement of the pathological condition of the affected glandular system, following with an analysis of fifty-eight cases of adenoid disease. The author also gives the bibliography of this grave affection.

Two papers by John Ashburst, Jr., M.D., follow. One on "Fracture of the Neck of the Scapula," and the other "On the Operative and Conservative Surgery of the Larger Joints." The latter is a very valuable contribution to surgical science. There are a number of additional papers of merit. These transactions are published in a style that is very creditable to the members of the Philadelphia College of Physicians.

On Poisons in relation to Medical Jurisprudence and Medicine. By ALFRED SWAINE TAYLOR, M.D., F.R.S. Third American, from the third and thoroughly revised English edition. With 104 illustrations. Philadelphia: Henry C. Lea. For sale by Robert Clarke & Co. Price \$6.50.

The value of this standard work is well known, the former editions being favorably received by both the medical and legal professions, and recognized as authority in criminal cases by the various courts of jurisprudence. The work has undergone a complete revision, rendered necessary by time and the constant advances made in medical science. The work is virtually one on medical jurisprudence, as it treats of poisons only in that relation.

We can not but admire the careful exactness with which the author treats of the methods of making a qualitative and quantitative analysis of the different poisons. The symptoms resulting from the introduction of poison into the system, the appearance of the individual, condition of the eye and voice, hearing and touch, are described with minuteness, as well as the pathological appearances after death. Cases are reported in confirmation of and for illustration of conditions stated to exist. As a work of reference, we know of none better on this subject.

A Report on Trichinosis, as observed in Dearborn County, Indiana, in 1874. By GEORGE SUTTON, M.D.

This is of interest by reason of the careful post-mortem examinations made in the case of two children who had died from eating the meat of trichinous hogs. In one case very few trichinæ were found in the tissues of the body, death evidently resulting directly from severe gastro-intestinal and peritoneal inflammation. In the other, the pathological appearances were similar. In the case of an adult that had died, a small piece of the thigh was permitted to be removed, and was found to be literally filled with trichinæ. A week after the death of this person, a small piece of the gastrocnemius muscle was obtained; this was also found to be filled with trichinæ. The paper is very carefully prepared, the author exhibiting a commendable zeal in the investigation of the subject.

Annual Report of the Supervising Surgeon of the Marine Hospital Service of the United States, for the fiscal year 1874. JOHN M. WOODWORTH, M.D., Supervising Surgeon.

This report is one that certainly reflects credit on not only the supervising surgeon, but upon the other medical officers connected

officially with this branch of the government service. There is, first, a carefully prepared statement of the merchant-marine service of the United States, detailing the amount of tonnage, classes of vessels, with their strength in officers and men; the actual cost of medical service to the sick and disabled mariners at the different ports, both on the coast and rivers, enumerating the number of cases of each disease, with the mortality in the various districts. There is also included in the report a number of valuable papers, contributed by the officers of the corps. The whole corps, with the supervising surgeon at the head, seems to be devoting special attention to the improvement of the sanitary condition of the mariners connected with the merchant service, working on the principle that preventive medicine is much the most economical in the end.

Vision: Its Optical Defects, and the Adaptation of Spectacles. Embracing: 1. Physical Optics; 2. Physiological Optics; 3. Errors of Refraction and Defects of Accommodation, or Optical Defects of the Eye, with seventy-four illustrations on wood, and selections from the test types of Jaeger and Snellen. By C. S. FENNER, M.D., Louisville, Ky. Lindsay & Blakiston, publishers. For sale by Robert Clarke & Co.

This work, as the author's preface indicates, is intended "to give in a concise and popular, yet comprehensive form, a résumé of our present knowledge of physiological optics and the defects of the eye as an optical instrument." To him it has evidently been a labor of love, and, notwithstanding the many disadvantages occasioned by the serious accident to his own vision during its preparation, we think he has succeeded admirably in his purpose. The subject of this treatise involves the consideration of matters too abstruse to make it a popular text-book to the general student, but to medical men as a book of reference it will be valuable. Those who are interested in the study of optics will find in this work a large proportion of the practical facts embodied in several scientific monographs upon physical optics, the physiology of vision, and anomalies of refraction and accommodation.

The practical hints contained in the chapters devoted to spectacles and their uses, "together with the appendix upon the proper adaptation of spectacles," also his foot-note upon hypermetropia, page 205, might be read with interest and profit by all general practitioners of medicine.

We find in that note this important statement: "There is

scarcely a teacher in any of our schools who has not one or more pupils, who, after much study, particularly by artificial lights, does not suffer from fatigue, with nervous and vascular irritation of the eyes, accompanied by headache, and whose annoying symptoms would vanish, if permitted to wear properly adjusted convex glasses; but owing to a want of knowledge on the part of their physician, they are doomed to a continuance of the sufferings and inconvenience of defective vision."

The engravings, type, and general finish of this book are in the best style.

A Manual of Minor Surgery and Bandaging. By CHRISTOPHER HEATH, F.R.C.S., Surgeon to University College, etc. Fifth edition. Philadelphia: Lindsay & Blakiston, 1875.

It has been some time since we have noticed a work from this excellent house—a house whose works are always of the best, and whose energy can not be questioned. The present one leaves scarcely anything to be desired with reference to the subject treated of. It is fully equal to the valuable work of Dr. Smith, with several subjects added that are not treated of by that author.

T. M. S.

Physician's Visiting List for 1876. Twenty-fifth year of its publication. Philadelphia: Lindsay & Blakiston.

This contains almanac, table of signs, Marshall Hall's ready method in asphyxia, poisons and their antidotes, table for calculating the period of utero-gestation, together with the usual pages for visiting list, memoranda, obstetric engagements, etc. T. M. S.

Tinnitus Aurium; and Noises in the Ears. Second edition, with cases. By LAWSON TURNBULL, Ph. G. M.D., Physician to the Department of Diseases of the Eye and Ear of Howard Hospital, Philadelphia, etc. (Reprint from the Philadelphia Medical Times, June and October, 1874.) Philadelphia: J. B. Lippincott & Co., 1875.

This is a 13-page pamphlet, and in it he expresses the opinion that tinnitus is "invariably the expression of an excitation of the terminal or percipient element of the auditory nerve," and "depends upon disturbance of the circulation of the internal ear."

T. M. S.

Tar soap, made by the Packer Manufacturing Company, we have found to be not only a good toilet soap, but an excellent remedy for a chapped skin.

HEALTH DEPARTMENT, CINCINNATI, O.

Mortuary Report for the Month of September, 1875.

CAUSES OF DEATH.	CAUSES OF DEATH.	CAUSES OF DEATH.
Asphyxia..... 2	Dropsy..... 3	Laryngitis..... 2
Apoplexy..... 4	Dysentery, Acute..... 8	Liver, Disease of..... 4
Asthma..... 3	“ Chronic..... 2	“ Cirrhosis of..... 1
Angina Mem..... 1	Dyspepsia..... 1	Marasmus..... 6
Brain, Softening of..... 3	Drowning..... 3	Measles..... 2
“ Disease of..... 2	Erysipelas..... 4	Meningitis..... 9
“ Inf. of..... 5	Enteritis..... 4	Malformation..... 1
“ Concussion of..... 1	Entero Colitis..... 1	Neuralgia of Heart..... 1
Bronchitis..... 5	Falls..... 5	Old Age..... 11
Burns and Scalds..... 1	Fever..... 3	Paralysis..... 3
Cancer..... 3	“ Remittent..... 1	Peritonitis..... 1
“ of Stomach..... 1	“ Puerperal..... 1	“ Puerperal..... 1
“ Uterine..... 1	“ Scarlet..... 3	Pneumonia..... 15
“ of Liver..... 1	“ Typhoid..... 13	“ Pleuro..... 1
Casualties..... 1	“ Inter mittent..... 2	Premature Birth..... 1
“ Railroad..... 5	Gastro Enteritis..... 1	Rickets..... 1
Chloral, Hydrate..... 1	Gastritis..... 2	Scrofula..... 3
Choleia..... 1	Gangrene..... 1	Suicide by Poison..... 1
“ Morbus..... 1	Heart Disease of Valv..... 5	“ Hanging..... 1
“ Infantum..... 41	“ “..... 2	Tabes Mesenterica..... 3
Congestion of Brain..... 9	“ Organic..... 2	Toothing..... 9
“ Lungs..... 3	Hemorrhage..... 1	Tumor Ovarian..... 1
Consumption..... 45	“ of Lungs..... 2	Varioloid..... 1
Convulsions..... 25	Hernia..... 1	Variola..... 24
Croup..... 8	Hepatitis..... 4	Whooping Cong..... 4
Debility..... 3	Hydrocephalus..... 2	Wounds, Gunshot..... 1
Delirium Tremens..... 2	Inanition..... 4	Not Stated..... 1
Diarrhœa, Acute..... 10	Intemperance..... 4	
“ Chronic..... 11	Kidneys, Bright's Dis. of..... 4	Total..... 409
Diphtheria..... 3		

THE DEATHS REGISTERED DURING THE MONTH OF SEPTEMBER INCLUDE:

SEX.	AGE.	LOCALITIES.
Males..... 212	England..... 2	3d Ward..... 25
Females..... 194	Other Foreigners..... 8	4th “..... 26
Not Stated..... 3	Not Stated..... 1	5th “..... 9
Total..... 409	Total..... 409	6th “..... 18
		7th “..... 6
		8th “..... 15
		9th “..... 13
		10th “..... 12
		11th “..... 19
		12th “..... 16
		13th “..... 32
		14th “..... 13
		15th “..... 20
		16th “..... 7
		17th “..... 8
		18th “..... 12
		19th “..... 18
		20th “..... 7
		21st “..... 21
		22d “..... 18
		23d “..... 17
		24th “..... 12
		25th “..... 3
		Public Institutions..... 28
		Not Stated..... 2
		Total..... 409
COLOR.	LOCALITIES.	
White..... 396	1st Ward..... 16	
Colored..... 13	2d “..... 15	
Total..... 409		
SOCIAL RELATIONS.		
Married..... 105		
Single..... 280		
Widows..... 16		
Widowers..... 6		
Not Stated..... 2		
Total..... 409		
NATIVITY.		
Cincinnati..... 237		
Other Parts of U. S..... 66		
Canada..... 1		
Germany..... 63		
Ireland..... 28		

COMPARATIVE WEEKLY MORTALITY.

	Week Ending Dec. 3d, 1871.	Week Ending Dec. 1st, 1872.	Week Ending Nov. 29th, 1873.	Week Ending Dec. 6th, 1873.
Deaths in the City.....	151	71	108	116
Still Born.....	8	5	7	7
Total.....	159	76	115	123

THE CINCINNATI

LANCET AND OBSERVER.

J. C. CULBERTSON, M.D., Editor.
T. M. STEVENS, M.D., Asst. Editor.

VOL. XVIII.—DECEMBER, 1875—No. 12.

Original Communications.

Art. I.—Annual Address before the Cincinnati Medical Society.

By the Retiring President, AND. C. KEMPER, A.M., M.D. Published by request of the Society.

A science is a collection, and systematic arrangement, of the essential truths relating to any subject.

An art is a system of rules serving to facilitate the performance of certain actions.

The object of science is to ascertain and exhibit the truth; the object of art is to make useful application of truth to the practical affairs of life. The aim and end of science is to know the truth; the end of art is to do the right; the truth is the right in the abstract—in theory; the right is the truth in the concrete—in action.

Medicine is both a science and an art. The Science of Medicine needs but to be exhibited to be recognized. Starting in the most simple and natural divisions of its subject, it grows logically into massive proportions, each department being a compact volume of systematized truth, and the whole, made up of parts drawn from every field of intellectual research, rises from the level plain of human knowledge like a pyramid from a sandy desert.

The one subject of its consideration is human life. This it studies in health, and in disease. It proceeds first to anatomize the healthful human frame. Its bones, muscles, vessels, nerves—all its parts—are named in a full descriptive catalogue. The Science of Chemistry is at once brought into the service of the anatomist (and subsequently also of the physiologist, pathologist, and therapist), and the constituent elements of the human body are examined in their combinations, and in their ultimate segregations.

These studies are compared with similar ones in all branches of the animal and vegetable kingdom, and Comparative Anatomy completes the cycle of this first series in the science.

In every true science, its various parts are inter-dependent. This is particularly so in medicine. Anatomy and Physiology are intimately related. Anatomy deals with the constructive material; Physiology with the living organism. The one teaches us of what, and how, the organism is composed; the other, how it lives. Physiology studies the functions of the living organs.

In order that the animal life of man may be fully understood, the aid of Comparative Physiology is invoked—a science commensurate with that of Comparative Anatomy.

And then, there is something higher than the animal life of man; he is also an intellectual, and a moral being; and these are two fields of study, either of which is sufficient to engage the lifelong labors of the highest human intelligence.

If the subject seems to expand, so rapidly, into proportions that appear too unwieldy to be practical, it can not be said that any of these things are unnecessary, for the practice of the Art of Medicine is daily seeking information from the Science of Medicine upon these important practical topics.

But, if we proceed, we next encounter the Science of Hygiene, whose province is the preservation in health of this complicated moral, mental, and animal life. Here, again, we can not fail to notice that the Science of Hygiene grows out of the Science of Physiology, and is closely allied to Etiology. Hygiene concerns itself to know the laws of the health of the individual, and all that influences those laws, remotely, or immediately, as, Meteorology, Climatology, Telluriology, Ethnology, and the study of society with reference to its civil life, Civilization, and then considering man's social character, it involves many intricate subjects, such as marriage, hereditament, and the like, and expands into State Medicine, and even, the study of society with reference to human life, Sociology.

The second great department of the science treats of disease. Here, Pathology, though the last to be studied, is of the first importance, since it is essential to know what constitutes disease. Next rank Etiology, Symptomatology, and the effects of disease. From these all grows Nosology, classifying, and distinguishing diseases. Finally, the science culminates in the treatment of disease, adding a department of paramount interest, Therapeutics, which rests upon Physiology, Botany, and Mineralogy, as well as, in a notable way, upon Clinical Experience.

The Art of Medicine recognizes disease in the sick-room, its cause, its history, its probable termination, and its most feasible treatment.

No one can recognize anything with which he has not been previously acquainted, personally, or otherwise. One may however easily recognize things about which he is thoroughly informed, even though he has no personal knowledge of them. The Art of Medicine is, therefore, based upon the Science of Medicine. The science and its art are inseparable. If the Science of Medicine is conspicuous in the classification of what men call sciences, the Art of Medicine must take equal rank.

In general, the Art of Medicine inculcates the means and methods of Diagnosis, Posology, and Pharmacy. But each of these is varied for each disease, and again modified for each individual case of that disease, so that there is no end of their study. The change in the type of disease enhances the burden of this perpetual study, while, at the same time, it opens up a field of investigation, extending indeed over many generations, but which may yet inform us, not only of the etiology of those changes, but also of their cycles.

The diagnosis of disease is of paramount importance. Upon it the ablest men expend their best and most disciplined powers. The art of diagnosis is a model of scientific investigation.

A posological table naming the average doses of medicines is scarcely the alphabet of Posology. The experienced practitioner, only, can appreciate how greatly results may be modified by varying the dose of any given medicine. The novice is concerned to know what medicine to give, the veteran how to give it.

In the art of treating disease there are general dominant principals, and there are also rules for the government of the most minute details. But these details, as the details of every true art, are pliable, and he is best entitled to be called the master of his art, in whose hands they are most pliant.

Even the foregoing birds-eye view is sufficient to show that medicine is an important science, and that the practice of it is a thorough art. The preamble of our constitution recognizes this, and avows the object of our association to be, the cultivation and advancement of medical knowledge in this broad view of it. It will not be inappropriate to consider how best to cultivate and advance the knowledge appertaining to the Science and Art of Medicine.

Medicine is an experimental science. It rests upon observed truth. Throughout its whole extent there is a binding web of knowledge obtained by observation. Medical knowledge will reach its highest culmination through the observation of facts. Indeed, this observation is the test of all medical knowledge. Whatever theoretical views do not conform to observed truth must be rejected.

As scientific men, we can not ignore the body of our science. The works of those who are co-laborers with us, in different parts of the world, or who, having finished their course, have left their works to speak for them, are equally, and, perhaps, even more important, than our own. It is true, that medical science has greatly advanced within recent times, but that does not justify any want of respect for that science as it existed before our times. Our forefathers may not have set the same estimate that we do upon some particular truths, and may have been ignorant of others, and yet far surpassed us in the extent and accuracy of their knowledge. It is curious to notice that many new ideas recently put forth, by high authority, startling the medical world by their sensational freshness, and securing wide-spread acceptance by their sensibleness, are ideas that have been embalmed in the literature of the profession for ages. To ignore the past of medicine, is to confess that medicine is not a science. He who attempts to build up medical science, without just recognition of the past attainments of medicine, is erecting a building that has no foundation. He who lightly regards the past achievements of medicine, in his restless longing for anything that is new, will be himself lightly regarded by the future. The essential qualification of those proposing to advance medical knowledge is, not only a familiar acquaintance with the science as it now is, but also an intimate knowledge of its development. It is this which justly entitles the medical profession to be ranked among the learned professions. The acquisition of past and present knowledge constitutes the learning. It is by our veneration of the past, alone, that we can see that our science has life.

Without life it can not grow. Without growth it can not be preserved. If we scoff at our fathers, our children will assuredly hold us in derision. If medical science has no past, it can have no future, and falls from its position as a science, to become mere charlatanism, characterized by superficiality, deceit, and instability. Let us have done with that bombastic egotism which would concentrate all wisdom in ourselves.

This just esteem of the ancient land-marks, that have guided us to our present position, will properly fit us to receive the first teaching of our practical work. Whatever simplicity may adorn a completed scientific truth, yet our hand is scarcely put to the work of advancing such truth, when we are impressed that the observation of medical facts is by no means easy. They are not like the noon-day sun, flooding the world with light, and compelling the attention of every eye; they are more like the twinkling star, in the far-off darkness, which throws out a gleam of light only now and then, leaving the earnest gazer in doubt if he beholds it or not. They are intricate, involved, abstruse, recondite. They are inwoven in mosaics that distort their natural colors. They lose their native shape by the pressure of surrounding circumstances. They are buried beneath unimportant superficialities, and hid in unthought of crevices.

And while truth is modest, and conceals itself, the powers of observation are weak and deceive themselves. Those powers of observation, uneducated, are useless, but the very education itself blunts their susceptibilities. There are "isms" in medicine, and he is fortunate, who, in his early education, is not imbued with an "ism" that may color his whole medical life. Thus men unconsciously deprive themselves of their natural strength. They do the same thing also knowingly. How prone some are to see things in the light of their own pet theory. They force themselves to observe falsely. Facts are even manufactured to order to suit a favorite theory. In no profession is the influence of authority so disastrous. Weak men shelter themselves under the opinion of some one more eminent than themselves. Designing men combine to enforce the acceptance of untenable theories. Even fashion becomes a tyrant.

The powers of observation competent to note medical facts should be educated fairly, employed honestly, and exercised in perfect freedom.

It is important that well-known truths should be reiterated. As

the miser counts his treasures o'er and o'er, and thus gratifies his greed, so the scientist, more nobly, delights to enrich his mind by looking again and again in the face of each familiar truth, whether arising under his own observation, or that of his fellow. Science thus obtains a permanent establishment. The scientist sees new beauties in old truths, and is set on to find new truths in familiar places. As the diamond is composed of but common carbon, so all durable improvements in science grow out of familiar knowledge. Be our bride ever so homely, we should not grow weary of her trinkets, but since she is surpassingly beautiful and loveable, her jewels will be always charming. Let us never be surfeited with the familiar truths of our profession.

These observed facts of our science and art are our intellectual stock in trade. It is only when they become as familiar as household words that we are competent to reason upon them. It is only when we reason upon them that we breathe into them the breath of a life which will reflect honor upon our profession, and confer benefit upon our race.

Those who are promoting the "tendencies of modern thought" would have us believe that Reason has some marvellously miraculous power of resolving all doubt, and revealing all truth. It becomes reasonable men to examine such exorbitant claims. Striking, once for all, at the very heart of this vaunted "tendency of modern thought," it may be said, although there is no prospect whatever of our being driven to such an admission, that even if the religion of Jesus Christ were proved to be the basest lie that ever startled heaven, still it is of inestimably more value, lie though it be, than the whole horde of those doctrines that would persuade us that man returns to dust and is annihilated, his dust becoming a vegetable, and after many cycles perhaps another man. To the reasonable scientist, who prefers immortality to annihilation, it is reassuring, in these last days, to be aware that human reason is fallible. Indeed the claim to infallibility is the derision of the ages. Let us listen to the mockery of that derision, ringing down the centuries that are past, into the present, and remember that science can not be infallible. Wise men will give to Reason the position which her own native modesty would choose; she can not be infallible, and she would not if she could, if she desired to be, she would be beside herself, insane, unreasonable.

The criterion of truth is for us then imperfect. But it is no more imperfect than all else that is human. The degree of perfection to

which this criterion of truth, our Reason, may be made to attain, depends upon our recognition of its imperfection, and our right use of it. Reasoning is an art that has its laws.

Now some men appear to study this art, not for the purpose of making themselves sound logicians, but rather that they may become adept sophists. Sophistry is easier, and hence more popular than logic. The novice may, and often does, reason sophistically, but his honesty of purpose, in time, surely corrects his false reasoning. The man of experience is guilty of sophistry, either because he is incapable of reasoning, or careless to reason correctly, or is intent to deceive. Sophistry is the art of the charlatan. It is, in its nature, dishonest. Sophistry does not even pretend to have any integrity. It can accomplish nothing that is not ephemeral. By the use of it, one may indeed, like Jonah's gourd grow to huge proportions in one night, and wither to nothingness in another night. Sound, hard, difficult reasoning only, is durable.

But even sound reasoning will lead to false conclusions, if the premises are false. This is the paramount incentive to the careful collection of facts. All effort to advance knowledge will surely fail, if it begins in error.

Having then collected all the facts we can, we proceed to compare them with each other, and with the sum of our medical knowledge. In this comparison we find ourselves beset with all the difficulties, and temptations, which attended our first perceptions of these facts, and others. If we find difficulty in getting clear perceptions of complicated truths, surely our comparisons of such truths will complicate our difficulties. There is also more scope for our passions, and prejudices, in this higher intellectual activity. The field is wider, and sophistry has free play. The understanding of the multitude becomes confused, and the temptation offered for the deceits of charlatanism is too great to be resisted by all.

However, the very endowments which enable us to gain accurate perceptions, qualify us to make precise comparisons. The price of the perfect exercise of these endowments is their right use.

After observing and comparing truth, in the art of reasoning, the mind weighs it. Judgment may be said to be Common Sense. Instinct may be educated. But instinct never lies. Common Sense is far more than instinct, and might be educated, if always truthful, to become one of the salient features in the character of man, entitling him to be considered the image of God. And yet the judgment of men is bought and sold in the market! No faculty of

the mind is more susceptible to influences that ought to make no impression upon it. The most frivolous desires, and the most unreasonable prejudices are often sufficient to control it. The most sturdy oak, growing in the center of the forest, will soon be leveled to the ground, when its fellows are all cut down about it. If it stand alone, upon a hill, receiving from its infancy every wind that blows, it will, even in its old age, resist the fiercest blast, unharmed. So, the medical judgment that depends upon influences other than are reasonable, is lighter than the thistle's down. Judgment, to be valuable, must grow from its youth up, acquiring strength by legitimate exercise, and unimpeachable rectitude.

One almost fears to speak of Faith. We are told that this is not the age of Faith. Mighty men have revealed to us that this is the age of Reason! and Faith is likely to become a homeless outcast, with none so poor as to own her friendship. But Faith is older than Reason, and when Reason, urged on by the "tendency of modern thought," attempting, Icarus-like, to soar beyond the realms of human ken, shall ignominiously fall, Faith will yet lift her from her disgrace and restore her to her appropriate place. The brightest pages of the history of man are colored by faith. The commonest every-day life of each individual is full of faith. Walking, and singing, and speaking, and eating, and sleeping require the exercise of faith. The physician who has no faith in his art is incompetent to practice medicine. He who has no faith in the science of medicine can not comprehend its art. One who has no faith in himself, will fail to acquire the knowledge of the science, and can never become a medical scientist. If reason is necessary to advance our science, faith is necessary to use reason. Our perceptive faculties would convey no knowledge to us, unless we believe that what they so convey has substantial existence, and that we, also, exist. Descartes has said, "I doubt, therefore, I exist;" it would seem to be more forcible to say, "I believe, therefore, I exist." We judge of distance, by sight, intuitively. Such judgment is based upon faith in the truthfulness of the impressions conveyed to us by our sight. We have similar faith in our perceptive faculties. Memory performs an important office in the comparison of different truths. Nothing strengthens memory more than an implicit faith in its accuracy. Faith is essential to judgment, for we can not possibly pronounce that to be true, which we believe to be untrue, without denying ourselves. There must, then, be perfect harmony between faith

and reason, for we can not reason without faith, and we can not believe without reason.

Faith, like reason, is easily injured. The man who would deliberately, or carelessly, impair his own powers of reasoning, or who would wantonly undermine the confidence of his faith in those powers, inflicts upon his mental constitution an injury, whose tendencies to produce mental incapacity, increase in a geometrical ratio. Our rational endowments may not be trifled with. We may not connive at error to attain desirable ends; we may not enforce the processes of reasoning, by illegitimate methods, to false conclusions, without receiving permanent injury. Our reasoning powers should always deserve our faith, our faith be freely accorded to our reasoning powers. It is in the union of faith with reason that the human intellect has performed its most notable achievements.

First, then, faith in ourselves, after that faith in our fellow-workers. It is easy for us, if we will, to make ourselves deserving of faith, and our example will exert a healthy influence to make others deserving. But we can not believe all men. Credulity is not, and can not become faith. Indeed it is destructive of faith, since faith is always joined with reason, while it is of the very nature of credulity to ignore the existence of reason. Medical workers may commend themselves to our faith by their past deeds. A worker's reputation is of immense value, nevertheless contributions to science from the highest authority require to be closely examined. Not only the interests of science, but the preservation of our freedom of thought, also, compels us to receive nothing unquestioned. The only authority for us is the commonly accepted truths of science. Either weak, or strong men, who adroitly surround themselves by those influences which enable them to claim to be authority, and enforce their unreasonable dicta, are the enemies of science. It is our duty to ourselves, and our science, to estimate the work of such men at its real value. On the other hand, those who have no reputation, or who unfortunately have acquired a reputation for incredibility, occasionally accomplish work that has value. As the gold-hunter seeks for the precious metal in the regular veins of ore, and in the sands deposited by the river, testing it all with his crucible, so we gather medical truth from all sources, submitting it all to the alchemy of fair reasoning, upon sound medical principles, leaving time to imprint the stamp of genuineness upon the results of our work.

One thing more in conclusion. There is no art about which peo-

ple generally think they know so much, and are yet so ignorant of, as the art of medicine. It is because the art is dependent upon the science of medicine, with which they are unacquainted. From this fact, and from the necessary uncertainties common to all sciences, it arises that people are more easily deceived about their health, or ill-health, than anything else. He is weak indeed, who, because it is remunerative, practices guile, whenever there is opportunity for it. Honesty is the best policy. Our responsibility is limited by our science. When we have done all that the present state of medical science enables us to do, we have done all that can be done. Each of us, for himself, and all of us for the sake of our science, are interested to have every man, who practices the art of medicine, practice it honestly in accordance with the established truths of the science. If medicine is not a science, I had rather be a door-keeper in the tents of the Hottentots, than a minister at her altar; if medicine is a science, I confidently expect to find, under her royal banner, protection and honor.

The medical man sees human nature in its most notable manifestations. He witnesses the beginnings of life, and its end. He receives the secrets of the individual, and he is a familiar in that holy of holies, the family circle. Youth gives him her hand as to a father, old age leans upon him as a son, the strong man accepts his counsel, and woman, ever honored, confides in him. Honor, truth, purity, virtue, high estate, fraud, violence, disgrace, wretchedness, and poverty are the recipients of his ministrations.

Without disparagement to others, purity of person and character, integrity of thought and purpose, incorruptibility of heart, speech and action, are virtues which may adorn his character with a peculiar fitness, as when the jeweler happily finds a fortunate arrangement, and a felicitous setting for his most beautiful gems, that their splendor may be adequately displayed.

Art. 2.—Case of Lithotomy.

By J. T. WOODS, M. D., Toledo, Ohio.

On August 20, 1875, Mr. H. Charter, of Toledo, called on me for the purpose of consultation in regard to a chronic difficulty of the bladder. His appearance indicated suffering, his cheeks thin and of delicate whiteness.

Inquiry elicited the following history:

Age 20, and by occupation a book-keeper. The first symptoms of urinary difficulty presented when he was about three years old, and has occurred at irregular intervals ever since.

Sometimes no difficulty would be noticed for weeks, or even so long as three months, during which time he pursued his ordinary avocations, but upon the occurrence of what he deemed "a cold," pain in the region of the bladder, and passing down the thighs, together with difficulty in passage, and frequent sudden stoppage of the flow of urine, gave him the greatest inconvenience.

These attacks had been of varying severity, but sometime recently had given rise to such agony as to cause profuse perspiration, the urine twice containing blood.

The frequency of the paroxysms had not been more irregular than their duration, as sometimes the attack subsided within a day or two, but often continued for three or four weeks.

He has now been suffering severely for several weeks, at first being compelled to abandon his duty as book-keeper, and for some days has scarcely been able to leave his room, finding relief only in the recumbent position. The suffering experienced has been so severe and persistent, that, during the past four months, he has lost in weight twenty-seven pounds, without other known cause. He has been, from the first appearance of symptoms, much under the care of medical men who uniformly pronounced the difficulty "a cold," and with a prescription dismissed him.

In due time, the acute symptoms disappearing, he would return to his duties—at intervals none of the symptoms would present. During the past winter he has, for three weeks, traveled every day on horseback without inconvenience.

Having come to consult me for this same "cold," his pale cheeks became suddenly whiter when I expressed my fear that there was some mechanical difficulty in the bladder, and proposed exploring the cavity with a sound—after a little hesitancy, consenting, I in-

roduced the instrument and instantly a clear and definite sound indicated, even to him, the presence of a stone.

Having come deliberately to the conclusion that life, without relief, was valueless, he very frankly accepted an operation for the removal of the offending stone as the only means of cure.

The patient was directed to take only a cup of coffee for breakfast on the morning of June 20, and about 11 o'clock, directly after administering whisky and morphia, he was placed under the influence of chloroform. With the assistance of several medical friends lithotomy was performed by the right lateral method, and an irregular calculus removed, weighing 120 grains, being somewhat the shape and about the size of a hulled hickory nut, the surface being nodulated. A careful exploration of the bladder revealed no other calculi, and after washing it out by the free injection of tepid water, the patient was removed and placed in bed. The thighs were kept close together by proper bandage, morphia administered, and the patient left to rest.

For three or four days a portion of the urine passed through the artificial opening, after which it took the natural course, the incision joining by immediate union. In two weeks he was able to walk in safety about his room, and in the third week walked into my office, entirely free from the pain that had been the bane of so many of his previous years.

Art. 3.—Salicylic Acid.

By J. S. UNZICKER, M.D., Cincinnati.

We have heard much of late of the preservative and disinfecting power of this remedy. The very fact that it is mostly combined with other things to make it soluble, like sulphite of soda, or borax, etc., makes me think that if the latter had been given by itself, it might, to some extent, have produced the same results attributed to salicylic acid. Glycerine is undoubtedly the least objectionable solvent for it, where we wish to use the salicylic acid either internally or externally. It requires more trials, however, than have been made, to determine whether it will do all that is claimed for it.

Professor Salkowsky, of Berlin, has recently made some experi-

ments which are not so favorable to salicylic acid as those previously reported, and the resumé of his experiments are as follows: "Salicylic acid, in a concentrated solution, puts off decay, but is not able to prevent it. It does not possess any deodorizing properties, although it has been supposed to. Decomposing liquids, when mixed with salicylic acid solution, retain their odor unchanged. In fact, it is difficult to see how it could deodorize, for this action can only be effected in one of three ways: *First*, by destroying the volatile substances that rise from the liquid; permanganate of potash, chloride of lime, and sulphurous acid deodorized in this way. *Second*, by absorbing these substances, as does charcoal, and to a less degree other porous bodies, like peat and plaster paris. *Third*, by concealing the foul odor, as does carbolic acid. Salicylic acid does not possess strong chemical affinities, nor form precipitates, nor yet possess an odor of its own. The action of salicylic acid is not due to its splitting up into carbolic acid and carbonic acid, as Kolbe originally supposed. The untenableness of this supposition is evident from the fact that salicylic acid acts when much less concentrated than carbolic acid. Besides, it is easily extracted from the mixture by means of ether, and no carbolic acid can be detected in it. As regards the practical use of salicylic acid externally, the fact that it does not entirely prevent decay is of little consequence, for, other things being equal, people always prefer that which offers perfect protection against decomposition."

Art. 4.—Diuretics.

By E. E. RIOPEL, M.A., M.D., Cleveland, Ohio.

There is possibly no class of medicine in the whole list of the materia medica that is more frequently used, and yet possibly none so empirically used, as diuretics. This does not occur from a want of knowledge, but through a neglectful habit, or, possibly, an old routine of prescribing a certain class of medicines. By a reference to prescription lists of two of the largest prescription stores of this city, I find that diuretics come in either in part or in whole of 78 per cent. of all the prescriptions, the largest number being written by empirics of the city and that class of traveling nuisance—quack doctors. In one instance, where two prescriptions are given to the

same person, I find fluid extract of buchu is in one, and infusion of buchu leaves in the other, thus giving the person a double charge.

We must not only give diuretics with caution, but we must know what class of diuretics to give, as they can not be given indiscriminately, simply because they are diuretics.

If we consider well the anatomy of the system we wish to act upon, we will readily understand what medicines are needed in certain cases, and how we may expect them to act. The therapeutic properties of a drug ought to be well understood before daring to prescribe it. So, also, must the anatomy be clear, that he may know the action of a drug.

The renal arteries, as they leave the aortic, are large, and run but a short distance, when they abruptly divide into four or five smaller branches, then again subdivide into a large number similarly, and on whose action depend the process of elimination, they enter a membranous capsule, the dilated commencement of a uriniferous tubule, and form a vascular tuft, which ultimately terminates in a still smaller subdivision, or capillary network, from which the efferent vessels take their origin. Within this body, called the malpighian body, is to be found the workshop, as it were, for the elimination of all that is not wanted in the blood. These capillary vessels have an exceedingly thin and elastic wall. If, then, they are dilated, they are much more porous, and more will pass through into the uriniferous tubules, thence through the papillæ into the kidney. It must not be understood that solids pass through these walls as solid bodies, but in solution, which afterward may deposit or crystalize. We can readily understand, then, that if they increase the force of the heart's action and of the vascular system, without a proportionate action on the renal vessels, we have, as a result, a hyperæmic condition of the latter vessels, and a plethoric condition of the renal vessels causes a freer escape of water through them, which is taken up by the uriniferous tubules. Upon the action or non-action of the afferent and efferent vessels, then, depends elimination or non-elimination by the kidneys. It is well, then, to understand the different conditions of elimination and the class of medicine that must be used in order to give us the desired result.

For simplicity we will divide the diuretics into four classes, with four conditions of elimination, and :

1. Diuretics that act on the vascular system only. 2. Simple diuretics, or those that act on the kidneys without affecting the

vascular system. 3. Simple diuretics, combined with those that act on the vascular system. 4. Diuretics that increase the elimination of solids.

One condition, however, must always be kept in view, viz., an hypertrophid condition of the vascular system will produce a greater bulk of urine, while an hypertrophid condition of the renal system produces no perceptible effect on the bulk of the urine. Care, then, must be taken that we do not increase the trouble in an hypertrophid condition of the renal system, by administering a diuretic that will increase the force and frequency of the heart's action, and *vice versa*.

Among the vascular diuretics, then, we have, as the most prominent digitalis, squills, etc., digitalis taking the first rank as the most efficient, increasing the frequency and force of the heart's action decidedly. In digitalis, then, we have a powerful remedy to reduce the quantity and change the quality of the blood, provided, however, the kidneys are in a condition to act freely. Whether this medicine acts primarily upon the kidneys, eliminating the water from the blood, thus relieving the heart from its superfluous bulk, and thereby allowing it to act with more freedom, is not yet settled conclusively.

It is of no material importance, however, which way it acts; the fact that it increases the force of the vascular system, is of sufficient importance to recommend its use.

2. Diuretics that act on the renal system, without exciting the vascular system, are the simple diuretics, juniper, squills, spirits of nitre, nitre, etc. They act simply as a stimulant to the kidneys, and producing a greater bulk of urine, relieving at the same time the blood of the water it does not need. It will not do, however, to give these diuretics when we have a congested condition of the kidney, for thereby we may produce inflammation; and, much less, must they be administered in cases of inflamed kidney. We must then resort to elimination by the skin; and it is a singular fact that these, viz., the elimination by the skin and kidneys have certain relations to each other very interesting. The bulk of urine is always greater when perspiration is less, and *vice versa*. Let a man drink freely without perspiring, as in a cold day, and the quantity of urine is perceptibly increased; not so, however, if there has been free perspiration. Advantage is taken of this when, from some morbid cause, there is an arrest of the excretions, as shown by a feeble, slow pulse.

3. There are certain conditions where it is well to combine both vascular diuretics and simple diuretics. A dropsical person, for instance, with no inflammatory condition, whose pulse is low and feeble, will be much relieved by associating squills, or digitals, or potash.

4. If there is an excess of lithates in the excretions, we can make this soluble by administering potash and forming lithate of potash, rendering elimination easier. Buchu, added to potash, will much increase the bulk of urine-solids.

One word more, in way of explanation, with reference to digitalis. It is universally acknowledged that the power of digitalis is to depress the heart's action, and lower its force and frequency. A pulse of 100 has been brought down to 40 in a few minutes. It is well, then, to state, from these seeming contradictory statements, that the heart's increase of force and frequency is more perceptible after a free elimination by the kidneys has been set up. It is possible that there is a primary action of the drug, first to the kidney, then to the vascular system, or, possibly, on the vaso-motor nerves, or all combined.

Art. 5.—Enuresis Nocturna—Incontinentia Urinæ—Mictio Involuntaria—Incontinence of Childhood—Bed-wetting.

A paper read before the Columbus Academy of Medicine, by J. H. POOLEY, M.D., Professor of Surgery in Starling Medical College, Columbus, Ohio.

Under these, and various other appellations, is described a peculiar affection of childhood, which is the most obstinate and vexatious of all the various forms of urinary incontinence; and which, being at the same time very common, is eminently deserving of our careful study.

I presume there is no practitioner of medicine who has not had his patience tried, over and over again, by these cases, and who has not, in some of them, prescribed various medicines, until he thought he had exhausted the materia medica, and given up at last in despair and disgust.

The affection occurs most generally in children from the age of two years to nine or ten, though sometimes it continues longer, even up to puberty, and, in a few cases, even beyond this. Its characteristic phenomena is that the child, who has no trouble of

the kind during the day, regularly and invariably has an involuntary discharge of urine at night—in other words, wets the bed.

This commonly occurs during the first sound sleep of the night, or two or three hours after going to bed, and as the discharge is generally copious, the results are disagreeable and unpleasant in the extreme. The bedding is soiled, and, from the constant repetition of the act, eventually completely spoiled; the protection of a rubber blanket, and every other means that can be employed proves an inadequate defense, and in time the apartment acquires a permanent urinous and offensive odor. The child, if not absolutely waked up by the occurrence, is rendered uneasy and fretful for the night, and if, as so often happens, it throws off the bed-clothes, is apt to catch cold, added to which, in some cases, abrasions and even ulcerations have been known to occur from the urinous contact. From these causes, as well as from those which may lie at the bottom of the malady itself, children who have been long subject to it frequently have a sickly and emaciated appearance. In the majority of cases the affection is a nocturnal one, the involuntary micturition is confined to the night; in some, however, it occurs also during the day, and especially whenever the child is excited, agitated, or frightened. The urine in these cases is healthy, as a rule, though it has been supposed by some authors to contain an abnormal proportion of lithates, or other irritating ingredients. But actual examinations, so far as recorded, show that, in all but a few clearly exceptional cases, this secretion is perfectly healthy. A number of the children thus affected are pale, thin and cachectic in appearance, though others, perhaps an equal number, are perfectly healthy, as far as the eye, even of a physician, can discern; there is nothing the matter with them except that they wet their beds at night. And, as already hinted, it is worthy of thought how far the unhealthy appearance of these children is the result rather than the cause of their unfortunate infirmity.

The disease is more common in boys than in girls. This is clearly the result of my own observations in the matter; of all the cases I have seen, and they have not been few, I should say four out of five had been in boys. And this is the verdict of all the authors but one who have noticed the matter at all, the exception being Guersant, who alone states that the complaint is equally common in girls and boys, but in this I am sure he is mistaken. Many writers who do not distinctly mention this point,

leave it to be clearly inferred by their language, and by the constant use of the masculine pronoun in their descriptions, that they were aimed principally at the male sex.

Vogel says that it is *much more* frequent in boys than in girls. Casper and Bierbaum (*Journal für Kinder Krankheiten*), make the same statement. Holmes, in his work on the Surgical Diseases of children, says: "There can be no question that boys are by far more liable to this disease than girls, the reason for which is far from clear." I shall take issue with him on this last point, for not only am I sure that the disease *is* more frequent in boys, but the reason seems to me clear enough in the more complex arrangement of their urinary apparatus, and its consequently greater liability to become the seat of those reflex irritations which I believe to be the principal exciting causes of the trouble.

Bierbaum says that the children of parents who suffer from certain forms of gout, will be affected up to the time of manhood with an obstinate nocturnal enuresis, whatever form of treatment may be adopted. This, I confess, seems to me very fanciful and problematic. Scrofula, worms, or, as it is called, helminthiasis, digestive derangement, obscure derangement of the brain, etc., are also enumerated among the causes, with what propriety I will not undertake to say, though I fear they are generally adopted as explanations because the practitioner has not searched carefully and intelligently for a more real one, or, at any rate, simply because he has not found it, and must have one of some kind.

Spinal irritation of various kinds seems a more probable cause. Holmes says that the worst case he ever saw was in a case of spinal caries, and that was in a girl.

By far the most frequent causes are to be found in an abnormality or irritation of the urinary organs themselves. And here we enumerate stone in the bladder, kidneys, ureter, or urethra, phimosis, narrow or adherent prepuce, excessive or retained smegma, congenital narrowness of the meatus urinarius, and excessive sensibility of some portion of the urethra, generally the membranous bulbous junction. Not very infrequently, nocturnal incontinence will be the *only* symptom of vesical calculus in a child, at least for a time. I have had two cases in young patients where this was the only thing complained of, and it was only on the introduction of a sound for purposes of examination, and without any previous suspicion of the fact, that the stone was discovered.

Hence, I am disposed to insist that the first thing to be done when

a patient is brought to us suffering from nocturnal enuresis, is to introduce a sound into the bladder; and all the more, because the attempt to do so will lead to the discovery, if it exist, of the next cause I have to speak of—phimosis. In sounding a child, it should always be under the influence of an anæsthetic. And here pardon me if I digress for a moment, to say that the difference between physicians lies not so much in any one's superior control of therapeutic resources, as his greater care and thoroughness in examining his cases. If stone in the bladder is found, it is unnecessary to say that it should be removed; this was done in my cases, and the incontinence, which was the only symptom, thus cured. Calculus in the kidney, urethra, or ureter, would be less likely to be overlooked, and the mere mention of its possible existence as a cause is all that is needed. Phimosis, and the allied condition of too narrow prepuce, adhesions between it and the glands, and excessive and retained smegma, are, I believe, the most frequent causes of the disease we are studying, and, unfortunately, I know are frequently overlooked. Absolute phimosis, or the condition of the prepuce in which it is too narrow to allow of the exposure of any part of the glands, as well as that minor degree of narrowing, in which the glands can only be uncovered with considerable difficulty, should always be looked upon as a sufficient cause of nocturnal enuresis, when they exist together, and be at once remedied by the operation of circumcision. In many of these cases, adhesions, more or less firm and numerous, may be found between the glands and prepuce; these should, of course, be thoroughly removed. They may, perhaps, exist independent of phimosis, though I have never known of such a thing; but none the less they must be completely torn apart, and kept from reuniting by the interposition of a layer of oiled linen for a sufficient length of time.

There are other cases where, without phimosis, but generally in connection with a more or less redundant prepuce, there is an unusually copious secretion of smegma, or the sebaceous matter peculiar to the glans penis, which is seen accumulated in very considerable quantity in the sulcus behind the corona glandis; in addition to increase in quantity it is also changed in character, and becomes irritant, as may be inferred from its penetrating odor, and the redness of the mucous membrane around the accumulation. In these cases, I believe that, equally with those mentioned above,

circumcision is demanded, or, at least, if not absolutely demanded, is the best and easiest remedy.

I might cite a great number of cases where I have performed the operation of circumcision on children who wetted their beds, and in whom the conditions above spoken of existed, and with complete success, but I will content myself with simply stating the fact, and only adduce one case, from the practice of a neighbor and friend of mine, in further illustration. A young gentleman, about eighteen years of age, came to him and told him that he was troubled with wetting the bed., that he had had this miserable infirmity ever since childhood, had been to a great many physicians and taken no end of medicine, all without any permanent benefit, although sometimes he seemed to get better for a while.

The doctor asked to see his penis; the young man seemed very much surprised at this, and stated that no one had ever examined it before that he knew of. Phimosis was found to exist, and the doctor told him he believed this was the cause of his trouble, and that circumcision would cure him; the operation was performed, and with the result promised, a perfect and permanent cure. In addition to phimosis and its allied conditions, there is another, much rarer, and, indeed, scarcely recognized at all in the profession, which is sometimes the cause of enuresis, and that is congenital narrowness, sometimes almost to occlusion of the meatus urinaris itself. I have spoken of this as a congenital condition, and, as far as I know, with one exception, it always is so, the exception I refer to occurs in the circumcised children of Israel. In them, sometimes, in the performance of the bloody rite, the end of the penis itself is slightly wounded, and cicatrization and contraction occludes, more or less, the meatus. I have observed this quite frequently.

The accidental occlusion, however is not so often provocative of enuresis as the congenital; I have seen only one case where it produced it. This congenital narrowing is rare, but as it every now and then occurs, it ought to be remembered and looked for in every case. If this form of stricture is found to exist, it may be treated by dilatation, but this method is both tedious and unsatisfactory; a better plan, by all means, is to divide it either by a bistoury and director, or, better still, with the little instrument known as a meatotome. Directions for this simple procedure may be found in any of the surgical works.

Dilation with a good sized bougie, every two or three days, must

be kept up till the little wound heals, when the cure will be permanent. Sometimes there exists an abnormal sensitiveness or irritability at a spot in the deep urethra, just at the bulbo-membranous junction, which excites reflex action of the bladder during sleep, and determines the emission of urine, just as a similar condition in older patients excites a seminal emission. This condition may be ascertained by the introduction of a steel bougie, when, upon its touching the sensitive spot, a peculiar shuddering is experienced, which is diagnostic. It is said that this condition sometimes demands the application of nitrate of silver, either in solid stick or solution; this, I imagine, must be very rarely the case; all that is generally needed is the introduction of a solid instrument, daily at first, then with gradually increasing intervals; this treatment, some authors assert, will cure enuresis, even when there is none of the peculiar sensitiveness of which we have spoken; and one thing may at least be said in its favor, that thus a stone may be hit upon when least expected.

In concluding this part of my subject, I desire to quote, with approbation, the following sentence from Mr. J. Cooper Foster's work on the surgical diseases of children. He says: "Always, the assumption should be that there exists a calculus, or other mechanical cause, until its absence has been demonstrated by careful exploration." I am persuaded that if this good rule were faithfully followed, there would be much fewer of the obstinate and irremediable cases of which we hear, and the reproach that now so universally attaches to us in the treatment of this disease, would be largely wiped away. But yet, after all due allowance has been made for the frequency of those instances where a reflex irritation from the causes mentioned is at the root of the malady, there still remains a class of cases where no such cause is discoverable, whose pathology is mysterious, and whose treatment is, at times, eminently uncertain and vexatious.

No doubt, in some of these, the complaint is simply the result of a bad habit, which, however, becomes so thoroughly engrafted in time, as to constitute a real disease; indeed, it is a wide practical question, whether many of what we call functional diseases are not the result of depraved physical habit.

Such cases may, perhaps, sometimes be reached by such truly moral means as shall enlist the strongest exertion of the little patient on the side of cure, though generally punishment and threatening are to be avoided; I would rather suggest promises of

reward. Vogel mentions one case, Bierbaum three, and Cooper Foster one, in which fear of punishment had led boys to tie a string tightly around the penis to prevent the discharge of urine, with the disagreeable result—the *rather* disagreeable result, Mr. Holmes naively calls it—of producing sloughing of the organ; there are other cases on record, but they are not within my reach at present.

Sometimes the disease appears to be, in some sort, contagious, or, at any rate, to spread by imitation or sympathy; this is apt to be the case in schools or charitable institutions; such an occurrence like that of imitative epilepsy or chorea, will suggest its own remedy. In a case where the habit had spread through a whole school, Casper assembled them all and touched three lightly with the actual cautery, threatening all the rest with the same; all were cured.

Various mechanical appliances, intended to occlude the urethra, have been advised and used from time to time; these consist of so-called juga, or yokes, to compress the penis, or of a truss to press the urethra in perineo. Two forms of juga and one of a truss, for this purpose, are figured in Heister's Surgery, edition of 1743. A more recent plan is the use of a broad elastic band of india rubber.

I can not help thinking that all such contrivances should be discountenanced. If tight or firm enough to do good, they are surely capable of doing harm; at any rate, they keep up a reflex irritation of their own, and, even if successful while in use, they tend, actually, to perpetuate the evil, which is likely to be worse than ever when they are discontinued; and, furthermore, they provoke attention to the organ and handling of it, a thing, especially in older boys, to be on all accounts avoided.

In an article on the treatment of incontinence of urine in children, by Sir Dominick J. Conigan, in the Dublin Quarterly Journal of Medical Science, he describes the results of a successful mechanical treatment by collodion. While the prepuce, slightly curved is held with the left hand, collodion is smeared over the little cap thus formed by the extremity of the prepuce, by means of a camel-hair pencil, or other blunt instrument; the collodion instantly solidifies, draws together the edges of the prepuce, and closes the exit for escaping urine. A fortnight's use of it diligently and carefully every night is sometimes sufficient for the cure. When it is desired to pass urine, the little wedge or cap of collodion is

easily removed by the finger-nail. Contrary to what might be expected, the patient is not compelled to rise at night to urinate; on rising in the morning, the prepuce is found slightly distended with urine. From this Dr. Conigan infers that the escape of the urine is rather due to want of opposition in the sides of the canal of the urethra, or to a feeble state of the circular fibres which are supposed to constrict the sphincter at the neck of the bladder. The bed should be raised at the bottom, so as to form an inclined plane from the hips to the feet, so as to allow the urine in the bladder to gravitate toward the fundus rather than toward the trigone. Dr. Conigan objects to the usual practice, sanctioned by the recommendation of some medical authorities, that the child should be awakened at stated intervals to pass his urine; believing that the bladder is thus trained to empty itself at stated intervals, instead of being accustomed to retain its contents.

I have no experience with the plan of Dr. Conigan, but have heard instances of its success in the hands of others.

There are certain points in the management of these children that are important; their supper, or last meal before going to bed, should be as dry as possible; especially should they avoid drinking much water at that time; they should be made to pass water just before retiring, and when the parents go to bed some hours later, they should, Dr. Conigan to the contrary notwithstanding, be taken up to pass it again. I will just mention a case in point: one of my own children, a little boy of about two years, began to wet his bed regularly every night; I told his mother when she went up, to take him out and let him make water; this he would do, generally, without waking, and sleep dry till morning; in a few months the trouble passed off. The first sleep of children is very sound, and the sphincter of the bladder comparatively delicate and weak; hence, a distension which will overcome the resistance of the muscular fibres does not waken the child, and he wets the bed. Sometimes these children, though not thoroughly awakened, are sufficiently aroused to convert their uneasy sensations into the perverted consciousness of a dream, and they think they are sitting upon the chamber-pot, or standing over it as usual, and I have known older boys to say they thought they were standing against a tree or fence and firing away all right. Some have said that the occurrence takes place only when the children are lying on their back, and have proposed fixing a knot over the sacrum to prevent it, and, as this is very liable to become displaced, others

have blistered the sacrum for the same purpose. All this seems to me sheer nonsense; in the first place, the proof of the assertion that such children lie on their backs more than others is wanting; I know that all do not; and, again, if they did, I fail to see that it establishes anything like cause and effect in the matter.

Blisters and actual cautery to the perineum and around the anus have been recommended. These are pretty severe measures, particularly the latter; if any one is inclined to try it, I would suggest, as the most convenient and elegant method, the heating of a glass rod in the flame of a spirit lamp. As remedies, both partly local and partly acting through the system at large, baths and douches of various kinds have been recommended. These have been used both hot, warm and cold; in the form of sponging, sitz-baths, and dashes or streams and also with the admixture of ingredients of the most varied description. Lallemand advised hot baths in which were mixed aromatic herbs of various kinds, with brandy or other spirits. Both warm and cold baths with various saline and sulphurous ingredients, such as common salt, sea salt, the salts of Marienberd, sulphuret of potash, etc., have had their advocates. I have had no experience with any of these except the simple cold sitz-bath, just before retiring, and this I can cordially recommend, having found it very efficacious in many cases. The water should be quite cold, the child allowed to remain in it but for a few minutes, and then dried and well rubbed and put to bed. That the application of cold water to the hips or even to the feet and legs, has some decided effect upon the innervation of the bladder, is, I suppose, a common personal experience with us all. For who has not experienced, during such an application, a temporary sensation of desiring to urinate? So that such an application, beside its good general effect, has a decided local influence as well, and should always be used, as an adjunct at least, to other treatment; if it is inconvenient, cold sponging will answer nearly as well.

Before speaking of the drugs that are believed to have a special influence on this disease, we may, perhaps, be pardoned for remarking, that every attention should be paid to the general health, and every discoverable derangement of function rectified, if possible. Among the drugs recommended, there are some which seem to have received the suffrages of a majority of authors and practitioners, and are probably deserving, to some extent, of their repu-

tation. Foremost among these are belladonna, strychnine, and the muriated tincture of iron.

Belladonna seems to be the most popular of all, and was a special favorite with Trousseau; indeed, this eminent physician seems to have had a mild craze on the subject of belladonna, for he used it a great deal, for a great many things. The extract may be administered, beginning with doses of one-tenth or one-eighth of a grain, gradually increased until some of its physiological effects, such as dilated pupils and dryness of the fauces make their appearance, the dose must then be slightly diminished, and continued at what we call the point of toleration, for a considerable time.

Strychnine has also been found useful; it may be given in doses of one-fortieth or one-thirtieth of a grain, to commence with, and cautiously increased. These two remedies seem to have given more satisfaction than any others, and I have certainly seen good results follow their administration in these cases.

Ergotine has been recommended; and, though I know nothing personally of its use in this disease, should regard it with favor, as its action on unstriated muscular fibre is very similar to that of the two drugs just mentioned, but it is by no means so safe to continue its administration for a long time.

Tincture of muriated iron is another favorite; and, no doubt, in addition to its general tonic properties, may do good in this disease, for it has a very decided action on the urinary organs; it may be given in doses of anywhere from five to twenty drops, three times a day, in water. Cantharides is another remedy well spoken of by some; I have used it repeatedly, and with some success; I have never given more than ten drops of the tincture, three times a day, to a little child. Fowler's solution in doses of from three to five drops, three times a day, is, occasionally, a useful prescription. Creosote has been recommended, but I know nothing about it. I succeeded perfectly and very rapidly in curing a case, quite recently, by giving a dose of chloral hydrate, about five grains, I think, at bed-time. The patient was a boy about nine years old, and in one week was perfectly cured by this medicine.

I have now mentioned all the principal drugs advised in the treatment of this annoying complaint, but a great many others have been praised by individual writers; such as iodine, cod-liver oil, quinine, cinchona, benzoic acid, balsam copaiba, cubebs, tannin, camphor, nitrate of potash, etc. Gross speaks encouragingly of

the use of anodyne enemata, and suppositories, especially the latter, in obstinate cases.

I did not expect either to offer anything new on this subject, or to treat it exhaustively; I have simply aimed at a resumé, or outline, of what was most interesting and important in regard to it.

I will say, in conclusion, that if we carefully exclude causes of reflex irritation, pay attention to the general health of the patient, use the cold hip-baths as auxiliary to other modes of treatment, we shall generally find that, with a fair perseverance with the remedies mentioned, we shall succeed in curing almost, if not quite, all of these cases.

Art. 6.—Cholera of 1873.

By W. R. SEVIER, M.D., Jonesboro, Tenn.

[*Note.*—This article is substantially, and to a large extent, literally a copy of a report made by me to Ely McLellan, M.D., U. S. A., one of the commissioners appointed under joint resolution of Congress to investigate and report on cholera epidemic of 1873. The paper, as published by the board of commissioners, was greatly abridged, and is, moreover, full of typographical blunders. I have endeavored, as I kept no accurate copy, to recover the MSS.; but, thus far, been unsuccessful, although encouraged by the assurance, made a fortnight since, that it will be returned as soon as it can be "copied!"]

No record of the whole number of cases which occurred during the epidemic at Jonesboro, Tennessee, was kept. I can only furnish the number of deaths, race, sex, and approximately ages, as follows: 15 whites; 15 colored; 16 males; 14 females; under one year, 2; one year and under ten, 1; ten years and under twenty, 3; twenty and under thirty, 5; thirty and under forty, 2; forty and under fifty, 3; fifty and under sixty, 10; sixty and under seventy, 1; seventy and under eighty, 2; eighty and under ninety, 1. Total, 30.

The first case was that of a refugee from the town of Greeneville, on the line of railroad, twenty-five miles west of us, on the 29th of June. This case was of violent character, but recovered. The patient was assiduously and tenderly nursed by one of our kind-hearted citizens. The next case, on the 4th July, was also that of a refugee from the same town. He was kindly cared for by the same individual, who took him to his house—an humble but healthily located dwelling—where he slept over night in the family room. He was next morning transferred to another building,

some two hundred yards distant, where he stayed until his recovery. The symptoms were rather obstinate, but exhibited no malignancy. The next person, and the first among our resident population attacked, was the wife of the individual who had demeaned himself so magnanimously toward "the stranger within our gates." She died on the fourth day of her illness. Four railroad hands, colored, belonging to the gravel train, but having their homes here, next exhibited the features of the disease. Two of these died within a few hours after the attack; a third, living one mile from town, recovered, but his mother, living in the same house, a feeble woman, contracted the disease and died. The fourth died of a fever, consequent on the cholera, some two or three weeks afterward. The disease now rapidly assumed the character of a malignant epidemic. The major part of our population thereupon incontinently betook themselves to various places of retreat; whilst the services of my intelligent associate, E. L. Deaderick, M.D., and myself were wholly engrossed by our business in town, to the exclusion of country practice.

The periods marked by the greatest fatality, were respectively the 29th and 30th of July and the 1st of August. The estimated mortality, up to this period, was forty to fifty per cent. of the whole number attacked.

The general plan of treatment had been based on the use of mercurials, opiates, quinine, brandy, sinapisms, etc. The results were anything but satisfactory. True, many gratifying, and in some instances surprising recoveries took place; but, on the other hand, a number of deaths occurred which, I am now sure, would not have occurred under the treatment subsequently employed. An anxious desire, stimulated by the appalling mortality referred to, to comprehend more clearly and satisfactorily the true pathology of the disease, led to a more diligent examination at the bedside, to a more correct grouping and analysis of symptoms, and, finally, to a result, in theory and treatment, eminently satisfactory and successful. The disease known as Asiatic cholera is essentially *toxicemia* or blood-poisoning, and the facts and considerations supporting the theory are as follows:

1. Some patients, when first visited, were found to be in a dying condition, whilst inquiry revealed the fact, in individual cases, that the patient had suffered but little purging, perhaps but one or two discharges, and no vomiting at all. The most rapidly fatal case we had, was that of a negro man belonging to the grave-digging

force. He died in a little more than four hours after the attack. In his case there was neither vomiting nor purging. A near relative of the writer died in Greeneville, after eleven or twelve hours' illness, I have been informed, who suffered but two discharges from the bowels, and no vomiting.

2. Cases occurred where death ensued twelve or fourteen hours after all discharges had ceased, notwithstanding the best directed and most diligent efforts at stimulation and alimentation.

3. The mental lethargy, depressed condition of the heart and arteries, feeble respiration, suppressed functions of skin, liver, and kidneys, are not singly, but collectively, of value as symptoms of this poisoned condition of the blood.

4. The separation of the constituent elements of the blood, coupled with the rigid cramping of the voluntary muscles, point to the same fact.

5. The almost uniform effect of remedies of conceded disinfectant and depurative virtues was the prompt amelioration of symptoms.

Believing such to be the correct theory in regard to the pathology of the disease, I expressed the opinion that "chlorine, in some one of its multitudinous combinations," would be found the effective remedy. The reasoning and facts were submitted to my friend, Dr. Deaderick, who readily and cordially co-operated with me in the practical application of the theory and the remedy. The first case selected was that of an unfortunate "nymph du pave," who had been pulseless for several hours. A strong solution of chlorate of potash was injected hypodermically over each breast, and one and a half to two grains prescribed internally every half hour to hour. Twenty-four hours afterward, she was found to be still living, but destitute of pulse. She was next placed on tr. sesq. chlor. ferri, ten to fifteen drops every half hour to hour; and twenty-four hours afterward, she was found to be still alive, but still pulseless. She was then placed on sol. perchloride of iron, but no appreciable advantage was discovered. She died, having been more than sixty hours utterly pulseless. A recovery might, perhaps, have been obtained in this case but for a miscarriage, which occurred a few hours after the attack. The litmus test, applied the day before, to the ejections and dejections of a lady dying of cholera, revealed the strong alkalinity to these discharges. In view of this fact, and that the general features of a well-developed case of cholera indicated it, I ordered the following formula:

R Tr. Sesq. Chlor. Ferri, ʒvi.
Hydrochloric Acid, . ʒi.
Tr. Opii, ʒi. M.

Fifteen to thirty drops, in a wineglassful of water, every half hour to hour, so long as diarrhea continues, etc.

Caution.—Mercurials must not be employed while using this mixture. Give from glass tumbler or teacup. Use no spoon or metallic vessel in administering the medicine.

When but little vomiting or purging existed, but other features marking the malignant type of the disease, parties were advised to give, as above, until well-marked and unmistakable evidences of reaction appeared.

The diet, in connection with this plan of treatment, is regarded as a matter of some importance. I prefer rich animal broths, beef tea, essence beef, chicken broth, etc., to rich milk; for the reason that the latter will form curds with the mixture, which, if not irritating and indigestible, will, at least, engross a large share of the mixture in their formation. The broths I advise to be liberally employed, particularly in that class of cases where the discharges are very profuse.

Of forty-five or fifty cases, and many of them of extreme character, occurring after the formula was adopted, we lost but two, both old brain cases. One laboring under copious serous discharges from the ear, associated with locomotor ataxia; and the other under hemiplegia of right side, of many months standing.

The dose suggested may, I am satisfied, in cases requiring it, be safely doubled, tripled, or even quadrupled. A negro woman, suffering from an attack of cholera, took a tablespoonful undiluted. No ill effect nor even inconvenience was sustained, beyond copious and loud eructations of gas from the stomach. A gentleman gave to his child, nine years old, a teaspoonful. The cholera was, in each case, promptly arrested, a second dose not having been required by either. The security from ill effects, in such cases, is doubtless due to the alkalinity referred to.

GENERAL OBSERVATIONS.

Much has been said and written of cholera—its diagnostic and prognostic features—which our observation of this epidemic failed to verify.

The “quick pulse” and “cold skin, covered with a clammy sweat,” were of such unusual occurrence as to be undeserving the

importance of symptoms. The skin was, indeed, in nearly all instances, of icy coldness, but generally dry; whilst the pulse, except in force and volume, as often as otherwise, exhibited no departure from its normal standard.

The "contracted pupil"* was not observed in any case, except as the result of narcotism.

The "painless diarrhea" constituted, generally, the initial stage of the disease; and vomiting and purging, with "rice-water" discharges, were characteristics of the malady in a more active and advanced stage of development. There were, however, exceptions in which the last-mentioned symptoms were not prominent, and a single case in which they were entirely wanting. Death but rarely results, we believe, from exhaustive discharges. There occur many cases of cholera-morbus in which they are far more profuse, and yet recovery readily takes place. The most rapidly fatal cases will, we conceive, generally be found to be of that character where they do not exist; for the reason that such discharges are purely eliminative—the efforts and channel through which nature seeks to relieve herself of the poison. The excretory functions are all suppressed, and in this emergency, should the only remaining outlet through the medium of the bowels be closed, the pent up poisons will only act with more deadly certainty and vigor. In the case referred to, in which vomiting and purging were entirely absent, there was not the slightest swelling of the abdomen or other evidence of retained profluvia.

Suppression of urine was a very constant feature of the disease, as it existed among us; but we think undue prognostic value is attached by some authors to this symptom. I drew from a male patient, on the fourth day after I had been called in consultation, something over an ounce, the first discharged in about five days. Dr. Deaderick drew from a female patient, on the fifth day, about half an ounce, the first voided within that period; yet both patients recovered without any untoward symptom. The catheter was introduced, in each case, simply for the purpose of ascertaining the condition of this important function.

Important questions here naturally arise touching the probable existence of uremic poisoning in this class of cases.

The general symptoms of uræmia, as an idiopathic affection, so far as the nervous system is concerned, do not correspond; but we

* Barclay.

are not prepared to say that in combination with other morbid influences it may not, in some cases, give to us a modified form of the disease. We do not think, however, that such is the case; and the most plausible explanation we can perhaps offer for the non-existence of the disease is the greatly impoverished and altered condition of the blood in some cases, and, in others, the vicarious discharge of urea by the bowels. In such cases as are characterized by profuse vomiting and purging, this explanation will suffice; and in that class of cases where these features are absent, death generally ensues too soon to be ascribable, in any measure, to the operation of this cause.*

The confident assurances given to us during the past year that cholera makes its attacks only "in the still watches of the night," were negatived to such extent that we may literally and truthfully say, "day and night were alike" to it. Nor was it more regardful of topical features; its visitations not more frequent nor more ruthless to dwellings by the water's side than to those occupying more elevated and airy situations.

Opium and brandy were, in some instances found serviceable during the initial stage of the disease. This is principally and particularly true of the latter; its "*modus operandi*" being doubtless the same as in the bites of venomous serpents. But whilst this is true, it must also be said that narcotism and intoxication were alike found to be conditions which co-operated powerfully with the original morbid cause in the rapid destruction of life. Opium in full and repeated doses is, we conceive, under any circumstances, to be avoided as a practice fraught with hazard, and not unfrequently followed by irretrievably mischievous results.

Quinine, astringents, pungent tinctures, antispasmodics, etc., were found to be of little, if any, benefit in any case.

Whilst it is perhaps true that no circumstances of local or general filth, as ordinarily defined, are capable of giving rise to such epidemics of this disease as have from time to time scourged the world, they are nevertheless to be regarded in the light of co-operative agencies predisposing to the disease by undermining the health and thus increasing its mortality; for we hold it as an axiom that those laboring under enfeebled or deranged health

* To assume that because of suppression there is *necessarily* uræmia, and that where death ensues in this class of cases it is *necessarily* from this cause, is a sort of "*ergo propter hoc*" reasoning, to be credited cautiously in the light of facts we have presented.

suffer more than the vigorous and robust in this, as in all other epidemics. All such sources of local or general filth serve, moreover, in a measure, however small, to swell the volume of poisoned atmosphere, which, like a tidal wave, engulfs towns, cities, countries and continents in its desolating flood. Therefore, "cleanliness next to godliness" is a fit motto for general observance by municipalities, families, and individuals.

What is the nature of the peculiar morbid principle producing cholera? Whence does it emanate, and in what manner does it operate to produce the symptoms witnessed in the disease? These questions have constituted the theme of elaborate and profound discussion for more than fifty years past; and yet that prince of authors, Watson, characterizes all that has been written as the "endless and perplexing" literature of the disease! At the risk of being classed with the contributors of this sort of material we shall, diffidently and deferentially, submit some facts and some reflections which may not be deemed altogether unimportant.

In a report to the American Public Health Association on the subject of this epidemic, we employ the following language: "If it be true, as physiologists assert, that hydrochloric acid exists, naturally, in the stomach of every healthy person, we need not task ourselves very greatly to comprehend the design of the Great Creator in placing it there. It was, by virtue of its antiseptic power, to prevent the decomposition of our food before its appropriation by the assimilative organs."

With the view of testing the solvent power of the acid, we instituted a series of experiments, the grand results of which was a demonstration of the truth that fresh beef, after having been digested in water containing thirty-three per cent. of the acid, for four and a half hours, at 100° Fahrenheit, and subsequently allowed to remain in the cold mixture for twenty days longer, showed no solvent effect from the acid whatever. *The beef, however, when removed was remarkably free from any taint and in a perfect state of preservation.*

The known virtues of chlorine as a disinfectant, and those of its compounds, chloride of sodium, chlorate of potash, bichloride of mercury, chloride of zinc, etc., as antiseptics, give collateral support to this opinion, touching the true office of this agent as it exists in the secretions of the stomach.

These experiments appear to negative the opinion so uniformly

expressed by authors respecting the office of this important agent. That its solvent virtues may be enhanced by the presence of pepsin, as suggested in a communication from my eminent friend, Dr. J. W. Draper, or by the alleged presence of acetic, or other acids, constituting the so-called "gastric juice," we are not prepared to deny; but, in the absence of any proof of this fact, we are compelled to recognize its prominent and principal virtues, as demonstrated by experiments, to be those of an antiseptic.

If we are correct in our opinion touching this property and office of hydrochloric acid in the stomach, it will readily be seen that its influence and importance are far greater than have heretofore been ascribed to it. As a familiar, but very striking, illustration of its office and influence, in preventing decomposition, we refer to the results which generally succeed a surfeit—particularly of animal food. *A diarrhea emitting a highly putrescent odor* generally ensues. Here the amount of food has simply been in excess of the amount of acid present, and decomposition necessarily follows. One or two doses of muriatic acid or of the hyperchlorinated tincture of iron will generally suffice to correct the evil. But the field of its operation is not restricted to the stomach. It has been found equally efficient in correcting the influence of cholera and other poisons after they have entered the circulation.

It will, therefore, be readily understood why the existence of atmospheric poisons, as during the epidemic prevalence of cholera, creates, so to speak, a double demand for hydrochloric acid in the stomach. If the supply of this agent is sufficient to repress the septic tendencies of our food, and to correct the poisons which are continually entering the circulation through the medium of the lungs, no detriment to health will follow. But if the supply is insufficient to meet this increased demand, the food will undergo decomposition in the stomach, septic poisons will be generated, and we shall thus, figuratively, have a "fire in both front and rear;" causes without and within operating to produce the same result.

In view of these facts, we can more fully understand why certain articles of diet have been known to provoke attacks of cholera. The exciting cause may be a highly poisoned condition of the atmosphere, or it may be a piece of putrid pork in the stomach of the patient.

It will readily be inferred that we regard cholera as the result of

septic poisons.* These poisons may, therefore, exist in the atmosphere, or they may be generated in the stomach.

Before advertng to the effects of certain classes of morbid agencies, in support of this opinion, we wish to express our individual regret that authors have found occasion to devote so little space to the consideration of the diseases produced by them; for the causes are by no means uncommon, and the results are of the most alarming character. For the two-fold purpose, therefore, of exhibiting the importance of this defect, as well as the influence of a class of poisons closely related to, if not identical with, those producing cholera, we instance:

1. The effects resulting from eating putrid meats, sausages, etc.

Among other symptoms enumerated by Apjohn,† are absence of fever, vomiting, and purging, an extremely cold skin, a small pulse, and a suspended condition of the secretions.

2. The disease occasionally resulting from eating cheese, boiled custard, etc.

We have had access to no author beside the one just quoted, who devotes even a passing notice to this class of cases. Fortunately, however, our experience in the treatment of these affections furnishes the desired information. In 1864 or 1865, a malady suddenly made its appearance in Cincinnati, characterized by an absence of fever, vomiting and purging, violent cramping of the voluntary muscles, a cold skin, feeble pulse, and general and extreme prostration of the vital energies, etc. We do no injustice to our intelligent professional friends, in that city, when we say that much difficulty was experienced and much care exercised before we were able to determine whether the disease was or was not a genuine form of cholera.

It was ascertained, however, the next day, that the cases all owed their existence to a cheese sold by an honest German, at the "Lower Market," on the day previous. All who partook of it were similarly affected.

We witnessed, in this town (Jonesboro, Tenn.), some two years since, similar results from eating boiled custard. A whole family, consisting of husband, wife, children, two guests and servant, all "down with the same complaint," at the same time. The cause of

* But not less essentially septic because of their miasmatic form. The exhalations from our lakes and rivers are but water in a vaporous condition.

† Tweedie's Cyclop. Prac. Med., art. —, Toxicology.

illness is apparent in cases resulting from the use of putrid meats; but there was no appreciable taint or impurity of any kind in either the cheese or the custard.

We have adduced the effects of these respective agencies for the purpose of exhibiting the parallelism of results from the palpable and the impalpable poisons. "Like causes will produce like results"—an axiom not less true, we conceive, *ceteris paribus*, in medicine, than in physics. If decomposed animal matter, *en masse*, will produce the results observed from eating such substances, the same poisons will produce the same effects in an aeriform or miasmatic condition; modified, it may be, to some extent, by the presence of exhalations from decaying vegetable matter. The former, perhaps, owing to their condensed form, will require less time to operate than the latter.

It may be asked if such agencies are the products of the decomposition of animal matter; particularly, why they should not increase and accumulate with the continued growth of the world in population? Such, probably, would be the case but for the constant presence in the atmosphere and elsewhere of influences which tend continually to neutralize and destroy them.

To Prof. Schonbein belongs the credit of discovering the existence, and making known to us the qualities of *ozone*. Some diversity of opinion exists respecting the true chemical character of this important agent, but all concur, we believe, in ascribing to it, in an isolated state, the power of destroying animal effluvia instantly. It is said to exist uniformly and everywhere in the healthful atmosphere; and, as a negative evidence of its sanitary effect, the fact is related that it was found to be entirely absent from the atmosphere of London during the epidemic prevalence of cholera in that city in 1854. The same fact is stated in regard to the atmosphere of other infected localities. It is immaterial, in a practical sense, whether we adopt the opinion that such tests prove the total absence of ozone, or merely establish the fact of an inadequate supply. Should there be an absence or an insufficient supply of ozone, or, which is an equivalent proposition, should the cholera miasm exist in excess, the poison necessarily enters the system—a condition of things, as heretofore suggested, which creates an increased demand for muriatic acid in the stomach.

It will thus be observed that these two agencies, although operating in different spheres, are beneficently ordained and arranged for the preservation and protection of life and health. The one

operating to repress and correct poisons in the stomach and blood, whilst the office of the other is, in like manner, to repress and correct poisons in the atmosphere. Thus related in properties, and co-operative in their offices, it follows, as a natural and unavoidable corollary from the premises, that the absence or deficient supply of the one necessitates, for the purposes of health, the constant and full presence of the other.

We need not, in view of the opinions expressed, stop to inquire whence emanate these toxical agencies. Their sources of supply are almost infinite, and are co-extensive with the boundaries of human habitation, embracing the decomposing filth of cities, towns, and crowded communities, of armies, battle-fields, and cemeteries; in short, wherever a human being dwells, or an animal dies, causes exist to augment, in a degree, however small, the volume of poisoned atmosphere. Under what electric, thermometric, barometric, or other influence or condition these agencies are aggregated and condensed, we can not say; nor are we able to say how far such causes may operate to determine the presence or absence of ozone from the atmosphere.

We have nothing to add to the views expressed concerning the pathology of the disease in the body of the report. No single feature of such toxemic condition, we believe, is absent; whilst we are unable to explain their existence on any other hypothesis. In a healthful condition, the blood is the "*fons et origo*" of life, furnishing appropriate nourishment and stimulus to all the organs of the body; in a poisoned condition it is a stream of death, coursing rapidly through the system, impairing, perverting, and suppressing their functions.

We have thus sought to explain the origin and pathology of the disease by the natural operation of causes which are known to be constantly present in the atmosphere, and which, as we have shown, are capable, when in a palpable state, of producing all of the effects witnessed in cholera.

The arguments, "*a priori*" and "*a posteriori*," furnished by the preventive and curative treatment employed, fully sustain the value of the agent designated, and give indirect but strong proof of the correctness of the opinion expressed touching the principal office of muriatic acid in the stomach.

No circumstances of local or general filth were observed to influence or control the presence or character of the epidemic in any manner. A rigid surveillance was kept up by the municipal au-

thorities for at least a month prior to the advent of the disease. Thorough renovation or entire removal was the order, and the town, for once at least within the memory of the "oldest inhabitant," was perfectly clean. Nor was defective drainage or imperfect ventilation observed to exist in connection with any residence visited by the disease.

A very general belief occupies the public mind that persons using limestone water are peculiarly addicted to the disease. We are not inclined to attach very much importance to this opinion; but it must be admitted that during the recent and perhaps other visitations of the disease, its virulence was marked in the regions of limestone formation. Indeed, I am not aware that it prevailed outside of such formation during the epidemic of 1873. If it were possible for the lime existing in the water to displace the hydrogen, and give us chloride of lime instead of muriatic acid in the stomach, the opinion would at once appear philosophical. But the possibility and probability of such displacement and combination in the alleged presence of acetic and other acids, are questions which we leave to the solution of the practical chemist.

Some additional facts were observed which perhaps may be worthy of note as bearing on the theory offered concerning the pathology of the disease.

I had, on several occasions, particularly late in the afternoon after visiting my patients, found myself laboring under muscular debility, or an inability to control muscular movement, I hardly know which, to such degree that I unconsciously sought support by placing my hand on any railing or fencing that chanced to stand by the way. The feeling was that of intoxication. My associate, Dr. Deaderick, experienced the same symptoms. Rev. Mr. McCorkle, who had been faithful in his ministrations to the sick at Greeneville, and Rev. Mr. Lockwood, who had been alike faithful and constant in his holy ministrations at this place, both experienced a like effect of the poison. I visited the last-mentioned gentleman, who complained that he "could not walk straight." There was no other symptom of ill health.

I shall in conclusion mention, in addition to the two cases alluded to in the body of my report, some two or three other cases connected with the question of contagion. Dr. Maloney, of Greeneville, visited Nashville during the epidemic prevalence of cholera at the latter place. The distance between the two points, by direct line, is about 275 miles. There was no cholera in the intervening

country. On his return he was attacked and recovered. Mr. Piper, a near neighbor, next suffered and died. His remains were carried ten miles distant into the country for interment. Mr. Stevens, living in the vicinity, attended the burial, contracted the disease and died. Mr. Miller was present when Mr. S. was attacked, went for the physician, returned to his home, some four or five miles distant, was violently seized on the next day, or day following, and, after a critical illness of four or five days duration, recovered.

In connection with the first appearance of the pestilence at Greeneville, should be mentioned the fact that a few days prior to that event a public privy, containing some six or seven pits, with the accumulated filth of more than thirty years was cleaned. This was carted through the streets, in open vessels, to the north side of the town, where it was deposited on the land of the contractor. From this point to a creek, coursing through the southern part of the town, was a gentle declivity, a distance of more than half a mile. The drainage was in the very direction whence the filth was removed, and was obstructed almost the entire distance by vegetation and other causes. The whole slope presented fairly to the action of the sun's rays. The circumstances we regard in the light of contributive influences only.

No other case occurred in the neighborhood where Stevens died, but some two or three were developed in the vicinity of Miller's residence. These were, however, on the line of railroad, and only thirteen miles from Greeneville.

The exhalations from the lungs, as well as those from the ejections and dejections are, we are satisfied, capable of reproducing the disease. The effect of such effluvia on the party exposed will be determined by the conditions heretofore specified.

I close this communication with the single remark that whatever diversity of opinion may exist in regard to the views expressed concerning the pathology of the disease, there can exist none respecting the efficacy of the treatment suggested, after it shall have been subjected to a faithful trial. The effects of lime-water in a case of poisoning by oxalic acid are not more prompt nor more distinctly marked.

Proceedings of Societies.

THE CINCINNATI MEDICAL SOCIETY.

Reported by B. STANTON, Secretary.

Society met October 12, 1875—the president, Dr. Kemper, in the chair.

Dr. Dandridge presented a femur which he had removed from a boy who had died October 10th, after a few days' illness, and gave the following history:

Two years ago last July, he was called to see the boy, then five years old, who had been run over by a street car, resulting in a compound comminuted fracture near the middle of the right femur. The integument and muscular tissue were torn or cut for a distance of six or eight inches obliquely across the front of the thigh, extending nearly to the knee. No portion of the bone was removed at the time of the injury. He made a good recovery, except that there was a fistulous opening on the inside of the thigh opposite the middle third, which communicated with the bone near the point of fracture. This opening continued, in consequence of the presence of some necrosed bone, until the boy's death, his parents refusing to have it operated upon. Nevertheless, his health was comparatively good. In consequence of the firm contraction of the cicatricial tissue, there had been no motion of the knee-joint since the injury. For two weeks preceding his death, he had been kept out of school by an injury to a toe of the right foot. Four days before his death his left leg became œdematous. This condition soon extended to the groin and to the right leg. Then followed a dropsical effusion into the abdominal cavity, and intense pulmonary congestion. Death occurred, as before stated, October 10th, after only four days of severe illness.

During his last illness, his physician was not summoned until the evening before his death, and was only visited by him once.

The parents consented to the removal of the femur, but objected to any examination of the body. There was found to be a slight twisting of the bone at the point of fracture, the toe turning inward. A very good union had taken place except in front, where, partially imbedded in the callus, was a piece of necrosed bone—a portion of the shaft, which, at the time of the accident, had been detached from the periosteum, had died, and given rise to the discharge. The fragment was not firmly bound by the callus, but might easily have been removed.

An interesting question which arises, is the cause of the boy's last illness and death. Amyloid degeneration of kidney is sometimes caused by long-continued suppuration. This would account

for the anasarca. But against the theory of amyloid renal degeneration were the facts that the boy had enjoyed good health since the injury, and there was no anasarca of the face and upper portions of the body. There had been no opportunity to examine the urine after the attending physician saw the patient. There had been no suppression.

In answer to questions of Dr. Comegys, Dr. D. said there was no hepatization of lungs, only congestion.

Dr. Comegys thought the œdema of the legs might have been due to some obstruction to the return of blood through the veins. If the œdema had been in the upper part of the body, the idea of amyloid degeneration might be maintained. Absorption of septic matter might produce a condition of system which would give rise to the œdema. He gave an instance in which the absorption of some poison from an abrasion on the ankle gave rise to severe inflammation of the popliteal, and afterward the inguinal glands; also, a case presenting the characters of remittent fever until the development of a local lesion—an abscess near the knee-joint, which resulted from the absorption of some septic material from an abrasion on the heel, caused by a tight boot. In these cases the lymphatic system alone may suffer, or the disease going farther, the serous structures may be involved. Thus, in the case mentioned by Dr. D., the fistula may have given rise to the septicæmic condition.

Dr. Walker thought that the discharge having been constant since the receipt of the injury, it would hardly seem probable that it could have caused so sudden a condition of blood-poisoning.

Dr. Kearney. Is a chronic suppuration, which has existed for two years, ever the cause, or does it lead to septicæmia? The speaker thought it not likely; and other symptoms in the case did not seem to indicate that this was a case of special blood-poisoning.

Dr. Walker mentioned a case of compound comminuted fracture of the forearm, which was followed by a fistulous opening connecting with the ulna. Two weeks ago he removed a section of necrosed ulna, and yet the remaining bone seemed to be its full size its whole length, the necrosed portion having been replaced.

Dr. Culbertson thought we should take note of the fact that at certain times poisons were more liable to be absorbed into the system than at other times, as in the case of vaccination, which sometimes takes, and sometimes does not. That may have been the case with this boy. A sudden attack of fever or a cold may have rendered the system more liable to absorb the poison just at that time.

Dr. Dandridge did not think there were symptoms of pyæmia. The œdema may have been due to some obstruction in the aorta. In addition to the injury to the toe already mentioned, there was also a slight injury of one finger.

Dr. Comegys said he was struck with the pulmonary condition in this case. Bronchitis or pneumonitis may have been the cause of death, or the fatal result may have been due to shock to the nervous system from the injury to the toe. As an example of great nervous prostration from apparently slight cause, he mentioned a case of

a child of strumous constitution and great nervous susceptibility, who returned from school one day in an exhausted condition and soon after had a convulsive attack. When Dr. C. saw her the next day, he found her with swelling, and ecchymosis of legs and hyperæsthesia of surface. After a time of apparent improvement under a supporting course of treatment, she suddenly got worse, complained of pain in the abdomen. On a more careful examination, he found she had had her ears pierced two weeks before and they were still sore. The removal of the rings was followed by immediate improvement, and she has continued to mend.

Dr. Mackenzie presented a specimen removed from the body of a man who had died in the Cincinnati Hospital, in August. Patient had been under his care two weeks before his death. He was admitted June 10th, complaining of soreness of throat and difficulty of swallowing. He had been thrown from a wagon a short time before, but it was not thought that that had anything to do with his trouble. The difficulty increased until he could no longer swallow solid food, and liquids with difficulty. About July 24th a bougie was passed, and two obstructions were found in the œsophagus, not far apart. The bougie was passed frequently until about August 20th, when they found it impossible to get it through the second stricture. Even a No. 9 catheter would not pass through it. The next day the resident physician attempted to pass the bougie. It readily passed the first stricture, but while trying to pass it through the second he felt something give way, although no more pressure was used than had been before. The pain increased, more serious symptoms supervened, and death ultimately occurred. There was no aphonia or difficulty of breathing.

Post-mortem examination: One inch below the level of the cricoid cartilage there was found a constriction, and an inch or two lower, another. On opening the œsophagus an ulcer was found between the two strictures, and in this ulcer a perforation opening into the space between the trachea and œsophagus. About one inch below the lower constriction, and between the trachea and œsophagus, was a pultaceous mass, which Dr. M. thought was due to the breaking down of a bronchial gland. There was no evidence of a tumor pressing upon the œsophagus, no cancerous cachexia; hence he was led to suppose that the strictures were of inflammatory origin. There was no history of corrosive poison. The man had been on a spree for some time before his admission. No disease in other organs.

Dr. Taylor agreed with Dr. Mackenzie as to the origin of the pultaceous mass found between the œsophagus and trachea. He mentioned a case in which degeneration of a bronchial gland gave rise to a persistent cough, which caused the friends to suspect lung trouble.

The society met October 19, 1875, Dr. Kemper in the chair. The minutes read and approved.

Dr. Goode presented a pathological specimen, showing the union

that had occurred after fracture of the femur through the base of the trochanter. in an old person. Six years ago he was called to see a woman 77 years of age, who, after a fall, presented the symptoms of fracture of the neck of the femur. Owing to pain, which was excruciating, and an irritable disposition, the patient refused to permit any appliance to be used by which extension could be made. The limb was supported as well as could be by bags of wheat placed along it, and thus comparative comfort was secured. She had no other treatment. In about three or four months she was able to get about on crutches, later could walk with a cane, and in about a year she could walk pretty well without any assistance. In December last the lady died, and the femur was removed. It was found that although there was much atrophy of the bone, due to age, a good bony union had taken place, and although no extension had been permitted, there was but about three-fourths of an inch shortening, and slight eversion. The fracture was found to pass through the neck and base of the trochanter. This case was of interest from the good union where the patient had refused to submit to treatment.

Dr. Taylor said the bone presented a very excellent illustration of senile degeneration, a condition which had no doubt existed before the injury, and he thought it singular that so good a bony union should have occurred.

Dr. Taylor reported a case of a lady, in good hygienic condition, who had just passed through her fourth pregnancy, this being the first for sixteen years. She was delivered two weeks ago, the labor being in no wise remarkable. It was easy; there was no hemorrhage; no detention of the head. She got along finely for five days after delivery, when a well-marked metritis suddenly developed. There was tenderness over the uterus; some enlargement of that organ, and some tympanitis. The lochia, which were offensive at the commencement of the attack, were soon arrested. There was also arrest of the secretion of milk; the tongue became dry and brown; pulse ran up to 120, and there was some delirium. There was marked increase of temperature. Opium and quinine were given internally and fomentations used locally. For three days past she had been improving. The tongue is red but moist; she takes more nourishment; there is less tenderness, and the temperature is declining. The lochia have not reappeared.

This was the first case of puerperal trouble he had seen this fall, but he had seen one case of spontaneous erysipelas since this occurred, and he presented it to ask whether other physicians had seen any tendency to such trouble, and to draw out some remarks as to treatment—particularly the use of disinfecting injections. Salicylic acid has been highly recommended in these cases. It has been used extensively within the last year in some of the foreign lying-in hospitals as a vaginal injection, repeated several times a day. At the same time cloths saturated with the solution are kept applied to the parts, surrounding the patient, as it were, with an atmosphere of the acid; or it is used in powder with starch, in the

proportion of one part of the former to five of the latter, which it struck him was rather strong. He had had no experience with this remedy, but had been in the habit of using other disinfecting vaginal injections as soon as there was any departure from the normal odor of the lochia. He had generally used the liquid hypochloride of soda, one part to eight of water, repeated three or four times a day, as long as the discharges were offensive. It is not irritating, and does not stain, as the permanganate of potassa does. As this trouble sometimes arises from decomposition of discharges, he thought the suggestion of Dr. Goodell, of Philadelphia—that the lying-in woman be allowed to sit up early, so as to promote the escape of fluids from the vagina, and thereby prevent decomposition within the body, and remove one of the causes of the disease—a good one.

The case of metritis occurred some days before he saw the case of erysipelas, and the erysipelas was well-marked when he first saw it, so that there could have been no connection between the two.

Dr. Unzieker did not think a mixture of starch and salicylic acid, in the proportions mentioned by Dr. Taylor, would be irritating if the acids were pure. As sometimes prepared it would be irritating. He thinks the application of the acid in powder is better than in solution, but if used in solution he prefers a solution in glycerine to an aqueous solution. He thinks the solution of hypochloride of soda one of the best disinfectants, but it should not be mixed with hot water, as the chlorine would be driven off.

Dr. Carson said the addition of borax increased the solubility of the acid.

Dr. Holdt said that if dissolved in boiling glycerine, and then diluted with water, the acid would remain in solution when cool, if pure.

Dr. Murphy said that in some women there was a very offensive discharge from the vagina before delivery, and after delivery a very unpleasant odor may sometimes be noticed when there has been no hemorrhage, and the contractile power of the uterus and vagina would prevent the retention of clots. If in these cases no clot is retained to decompose, why use a disinfecting vaginal injection? On the other hand, clots may sometimes be retained and undergo decomposition, and yet no metritis may arise. He thought there must be a predisposing cause. Mental condition may be a predisposing cause. Women who have been seduced, or who have had trouble during pregnancy, are more apt to have puerperal troubles. In the case mentioned by Dr. Taylor, the age and the long time since the last pregnancy may have had something to do with the attack. There being a constitutional cause, the local use of disinfectants could not reach the case. Constitutional treatment must be resorted to.

Dr. Taylor. As to the assumption that all puerperal women do not suffer from the poison, I accept it. There must be a predisposition to the disease. In hospitals there is more danger of infection than in private practice.

In nearly all cases there is, after delivery, a laceration of the genital organs in some part—a wound opening into the blood-vessels or lymphatics through which the poison may be conveyed. The poison may not be from a blood-clot; other fluids or disintegrating mucous membrane may furnish it, and in protracted labors where there is little discharge, the conditions are more favorable for the development of the disease than if there was a freer discharge. As to the benefits of injections, several things are gained. Decomposing matter is removed, further decomposition is prevented, and cleanliness is secured. He does not believe in the indiscriminate use of injections, but when the predisposition to metritis exists, cleanliness may avert the attack.

Dr. Davis thought it was good practice to pay particular attention to the removal of blood-clots, and as soon as he discovers any symptoms of metritis, he injects the vagina with warm water; if the lochia are arrested, and if there is an offensive discharge, he uses disinfectants. He has had a large number of cases of puerperal metritis from midwives. Some of these were fatal from neglect to remove clots at the time of birth, and inattention to cleanliness at the beginning of the disease.

SKETCH OF CINCINNATI MEDICAL SOCIETY.

Read before the Society by the Secretary, Dr. B. STANTON, October 26, 1875.

The Cincinnati Medical Society was permanently organized October 9, 1874, at the office of Dr. W. H. Taylor, by the adoption of a constitution and code of by-laws, the signing of the same, and the election of the following officers:

President—A. C. Kemper; 1st Vice-President—J. P. Walker; 2d Vice-President—W. H. Taylor; Recording Secretary—T. C. Minor; Corresponding Secretary—J. C. Mackenzie; Treasurer, W. T. Brown; Censor—Wm. Carson; Trustees—G. Holdt, John Davis, C. G. Comegys.

Dr. Minor declining the office of secretary, the present secretary was elected at the second meeting.

The following persons were present at the meeting for permanent organization, and signed the constitution at that time: Drs. John Davis, Murphy, Culbertson, Taylor, Kearney, N. P. Dandridge, Mackenzie, W. B. Davis, Epstein, Stanton, Walker, Brunning, Holdt, C. P. Judkins, Mussey, Kemper, Comegys, Brown, and Minor; and at subsequent meetings, Drs. A. S. Dandridge, Foster, and Carson, having participated at some of the preliminary meetings, completed their membership by signing the constitution.

The meetings of the society were held in the room of the Cincinnati Bar Association, from October 19th to November 21st; since that time in the room at present occupied.

The first paper read before the society, was read at its second meeting by Dr. Taylor, on "Ovarian Tumors," giving an account of a case which had been under his care. Since that time papers

have been read by Dr. Murphy, on "Irritability of Stomach, with obstinate vomiting of obscure origin;" C. P. Judkins, on "Syphilis;" Holdt, on "Diabetes Mellitus;" Murphy, on "Stamping Out Scarlet Fever;" Quinn, a reply to the same; Taylor, on "Morphia-Atropia Poisoning—the antagonism of these two drugs in toxic doses;" Clark, on "Mercury as a Supersedent;" Holdt, on "Progressive Paralytic Insanity;" Carson, on "General Paralysis;" Taylor, on "Tetanic Contractions of the Uterus (a translation);" and Walker, on "The Effects of Mental Disturbances during Pregnancy on the Development of the Fetus." These papers elicited considerable discussion.

The following subjects have also been brought before the society by the reports of cases, and discussed at some length, some of them a number of times: Rheumatism, scarlet fever, erysipelas, small-pox, syphilis, diarrhea, causes of obstinate vomiting, intestinal obstructions, obstructions of ductus communis choledochus, hepatic abscess, medullary carcinoma of liver, abscess of lung, hypertrophy of bladder, calculi, lithotomy, retention of urine, disease of prostate gland, renal tumor, cerebral tumors, hernia cerebri, traumatic inflammation of brain, aphasia, progressive paralytic insanity, general paralysis, locomotor ataxia, unilateral sweating, diabetes, placenta, prævia, uterine hemorrhage during pregnancy, gunshot and other injuries, aneurisms, cases showing the repair of bones after fracture, etc.

Discussions have also occurred on educational matters; relations of apothecaries, physicians, and the general public; physical examinations, abdominal explorations, prevalent diseases, vital statistics, therapeutics, toxicology, etc.

Numerous autopsies have been reported by Drs. Mackenzie, Dandridge, and Carson, and the same persons have, from time to time, presented many interesting and instructive pathological specimens, and I think I but speak the feelings of the whole society, when I thank them for the interest they have manifested and the instruction they have afforded.

Since the organization was perfected, thirty-three meetings have been held. These have been well attended, an encouraging degree of interest has been manifested, and under flattering auspices we enter upon our second year.

Dr. Mackenzie presented some pathological specimens, removed from the body of a man who had died in the Cincinnati Hospital, and gave the following history of the case:

Wm. C., aged 23. Admitted July 9, 1874, with fracture of inferior maxillary bone, compound fracture of the right femur at junction of middle and lower thirds, and rupture of the urethra.

On January 31st, some bony union; wound not healed.

On February 1st, he was transferred to Roh's Hill, having varioloid. Returned to the Cincinnati Hospital on the 28th. In the transference the union was broken up; and when he came back, the dis-

charge from the wound was very abundant. On June 1st, inflammation of the knee with fluctuation was noted, and the patient suffered great pain. On the 4th of June the upper fragment of the femur was found protruding through the wound. On the 10th of June, Dr. Mussey opened the knee-joint and evacuated a large quantity of pus, and on the 16th it was stated that the patient was gaining strength.

On September 20th, Dr. Conner removed the protruding bone, four inches in length, by means of the forceps, it having become loose. No union at that time.

On September 24th, it was noted that the union was alkaline, sp. gr. 1008; that it contained abundant albumen and pus, but no tube casts. It had been previously examined in June, but no albumen was found in it at that time.

The albuminuria continued, uræmic symptoms set in, and the patient died on the 24th.

The pathological specimens showed the ends of the femur, in which there was not the slightest degree of union; the necrosed portion of bone which had been removed by Dr. Conner; the fibrous ankylosis of the knee-joint, and the kidneys. The pelvis of one kidney was filled with calculi, and in the pelvis of the other kidney was a single calculus. These consisted of phosphate of calcium. There was no amyloid degeneration of kidneys.

Officers elected October 26th for the ensuing year:

President—C. G. Comegys; 1st Vice-President—W. H. Taylor; 2d Vice-President—W. T. Brown; Recording Secretary—B. Stanton; Corresponding Secretary—J. C. Mackenzie; Treasurer—N. P. Dandridge; Censor—W. B. Davis; Trustees—J. C. Culbertson, G. Holdt, John Davis.

The society met November 2, 1875, in regular session—Dr. W. B. Davis, president pro tem., in the chair.

Dr. Davis introduced the president elect, Dr. Comegys.

Dr. Comegys, on taking the chair, remarked that he was grateful for the honor of being elected to preside over a society composed of so many learned and well-known physicians. He had felt a deep interest in the prosperity of the organization from the commencement. It had long been evident that a single medical organization for Cincinnati and suburbs, now numbering well nigh 400,000 people, is insufficient to express its medical movements; that, in his opinion, medical progress here had been retarded by the old limitation. Therefore this society had no jealousies and no spirit of rivalry. We must do our best, and respect all other organizations striving to do likewise. In regarding the list of members, he felt at liberty to say that it was a representative organization of medical culture here, and it was only necessary for each one to contribute his share to its proceedings to give it a high character, not only here, but elsewhere.

Our great object should be to exhibit the medical facts of Cincinnati and suburbs, and in the development of which it would of

course be opportune to make use of the contemporary and corroborative facts with which the literature of the profession abounds. Of the value of medical societies in professional culture, we need not say much, for it is accepted that no man can tell how much or how little he knows until he participates actively in society meetings.

He begged the forbearance of the members for the many defects that they would be likely to see in his conduct of the proceedings.

Dr. Carson brought before the society a patient from the hospital, who had been here in March last, at which time his disease was diagnosed incipient general paresis, and the history then given was as follows: Age, 31; single; printer; cause of death of parents unknown; no history of syphilis; has been a free drinker, but did not get drunk. Two years ago his left arm was paralyzed about two weeks. Fifteen months ago, after working late at night, his head began to swim, he lost his sight, and immediately became unable to speak. The next day was as well as usual; resumed his work, although his left hand and arm were very weak. January 1st he caught cold, and again became unable to speak. Since that time his memory has been very poor. His lips tremble when he speaks. Tongue trembles when protruded and deviates to the right. He walks well.

February 16. Complained of severe frontal headache and pain running down left side of his neck and shoulders. No paralysis of ocular muscles.

February 24. Left pupil larger than the right; ophthalmoscopic examination negative; moved index of dynamometer to 79 with left hand, and all the way around with the right.

March 4. States that his eyes are growing dim; memory failing. Temperature in fourteen observations varied from 99° to 101° .

March 11. Hearing impaired; has chronic inflammation of middle ear and perforation of right membrana tympani; hears at twelve inches on the right, six on the left.

During the summer he was permitted to leave the hospital, and on October 21st he was readmitted and examined by *Dr. Carson*.

There was slight dragging by the right foot in walking; moves index of dynamometer to 80 with the right hand and to 58 with the left; co-ordination of muscular movements good; æsthesiometer shows sensibility of right hand less than left; eyes close about alike; some trembling beneath the right eye; tongue protrudes straight, but trembles; some fibrillary movements; no paralysis of muscles of pharynx; taste good—tested with salt and sugar; enunciation not distinct nor prolonged; in speaking, a little more movement about the right side of the mouth than the left; when asked when he came into the house, he could not tell; is unable to make the simplest calculations in arithmetic. Observations with æsthesiometer not satisfactory. Ordered three drops of tincture physostigma three times a day.

October 27. Delirious during the last two nights; had to be tied in bed, owing to a disposition to walk around the ward naked;

when spoken to he gave no answer, but stared in an idiotic manner. He has some difficulty in buttoning his clothes.

October 30. Has lost all ideas of decency; passes his stools in the ward.

October 31. Rolled out of bed last night; answers no questions to-day; has not eaten anything to-day, but previously has had a ravenous appetite.

November 2. Speaks some to-day; read a card and pronounced the name distinctly; has some pain, which he refers to his head.

Dr. Carson also presented two cases of muscular atrophy—the first with the following history:

Case 1. K., aged 61; tailor; German; single. Father died of rheumatism; mother still living, aged 85. No venereal history. He says that two and a half years ago he fell upon his hands, dislocating both shoulders. The dislocation were reduced, and he immediately afterward began to have neuralgic pains in his shoulders, neck, arms, and hands. He has most pain about his right hand and the joints of his fingers. Pain is increased by using the hands or by pressure. There is wasting of the muscles of the shoulders, arms, and hands, and loss of power, particularly in the extensors; more marked on the right side.

Case 2. C., aged 50; laborer; born in Ireland; married. He states that during the last three years he has had occasional attacks of muscular rheumatism; he has most pain in the muscles of his neck, shoulders, arms, and hands. His health otherwise has been good. No specific history. Father died at 70, his mother at 65. He has been breaking stones on the roads. In this case there is wasting of the muscles of the shoulder and arms; more marked on the left side. There is almost complete paralysis of the extensors of the right hand; the fingers are flexed. He states that for some time he has noticed a twitching of his muscles. When exposed to a current of cold air, fibrillary contractions are perceptible. He has some pain between his shoulders.

October 5. Can scarcely grasp anything.

October 8. Has been taking strychnine and quinine; is gaining in weight; no perceptible increase in muscular power; examined surface of forearms with a surface thermometer; find temperature of right, $92\frac{1}{2}^{\circ}$; left, $93\frac{1}{2}^{\circ}$.

Remarks on the above cases by *Dr. Carson*:

As to the origin of these cases. In the first case, was it of traumatic origin? If traumatic, was it from shock to the spinal cord at the time of the injury, or may it have commenced from peripheral shock, and, by an ascending neuritis, have affected the cord? An ascending neuritis of one side may have extended by continuity of structure to the opposite side. The earlier views were that the disease first affected the muscular tissue and the nervous system became affected by extension of the disease. The view now generally held is that the disease is primarily in the nervous system.

Gentlemen may remember a case I presented some months ago of sciatica and unilateral sweating. In that case I took the ground

that there was an ascending neuritis from the sciatica, extending to the spinal cord, and thus giving rise to the unilateral sweating.

In the last case presented, the muscular masses about the shoulder are better preserved than in the first; but about the hand the atrophy is more marked. In this case the left hand is more affected; in the first, the right. Fibrillary movements more marked in the first case. In the second case, what first attracted the attention of the patient was the loss of power in the arms.

In the case of a male patient, who for a long time had pain in his fingers and wasting of muscular tissue, and ultimately locomotor ataxia, and of a female who had pain in the thumbs, of long duration, and so severe as to waken her up at nights, there were evidences of the spinal origin of the disease. In all cases of muscular wasting which have made much advancement, there have been found changes in the cord.

As to the treatment of these cases the induced current has been tried, and quinine and strychnine have been given internally.

Dr. Davis said that some years ago a child, not three years old, was brought to him to be treated for paralysis of one arm. The parents had noticed that without any preceding illness the child had ceased to use one arm. In that case galvanism had been used, but without any good effect. For two years there was no perceptible improvement. Since that time he had known nothing of the case.

In his own case, following an attack of acute peritonitis, he had an attack of acute inflammatory rheumatism, affecting all the joints, particularly the shoulder-joint. He almost despaired of ever regaining use of his arm. As his general health improved by travel, etc., the difficulty was removed, and the atrophied condition disappeared.

Dr. Carson said that three years ago he had seen a case in consultation with *Dr. A. M. Brown*. In that patient, a girl, the first symptom noticed was loss of power, which gradually affected the upper and lower extremities. Later, symptoms of disease of the upper part of cord, as difficulty of speech, difficulty of swallowing, etc., presented. He had diagnosed the case as one of progressive muscular atrophy. The patient soon began to improve and is now well. The diagnosis, he thought, was correct; but the prognosis, which had been unfavorable, was incorrect. He could not account for the favorable change. The galvanic current had been used, but without apparent benefit at the time. Phosphorus had been given for two weeks and then discontinued. He did not know what to attribute the improvement to. *Trousseau* says these cases are invariably fatal; but *Dr. C.* thought that some other cases had recovered.

Dr. Holdt said that, as to therapeutics, it was his conviction that when the ganglionic cells of the cord had entered on a disintegrating stage the disease can not be stopped, but may be accelerated by the galvanic current. He had just as little confidence in remedies

directed to the nervous system itself, as strychniæ and phosphorus. As to the latter, there was enough of this in a properly selected diet to meet all the wants of the system. In a case which has not progressed to the stage of disintegration of the ganglionic cells, the recovery would not only not be hastened by the agents mentioned, but might be prevented.

INDIANA, KENTUCKY, AND ILLINOIS TRI-STATES MEDICAL ASSOCIATION AT VINCENNES, IND.

Reported by G. W. BURTON.

The society was called to order by the president, Dr. B. F. Swafford, of Terre Haute, at 8 o'clock p. m., Tuesday, October 26th, 1875.

His honor, Mayor Beeson, delivered an address of welcome to the delegates of the various medical societies, paying a well-deserved tribute to the high standing of the profession.

Dr. Joseph W. Thompson, of Paducah, Kentucky, on behalf of the delegates, responded to his honor, the mayor, in a few appropriate remarks.

Dr. Beard, chairman of Committee on Arrangements, then delivered an address, giving a resume of the history of Vincennes, and stating also the purposes and objects for which this convention was called.

Dr. Swafford, the president, then delivered a short address.

Dr. Garrish, of Seymour, asked of the president for further information regarding the intents and purposes of this convention, as to whether it in any way conflicted with the State medical societies, etc.

The president replied at length, stating that no such conflict was contemplated, but, on the contrary, it would act in harmony with that organization.

The question of organization was briefly discussed by Drs. Thompson, of Kentucky; Beard, of Vincennes; Letcher, of Kentucky; Walker, of Evansville; Pritchett, of Kentucky; Swafford, of Indiana; Du Kate and Burton, of Indiana.

On motion, the convention adjourned at 10 $\frac{1}{4}$ p. m., to meet at 9 a. m. on Wednesday.

The second day was employed in the reading of papers and the discussion of medical and other scientific subjects.

The Committee on Organization reported in favor of a permanent organization, and recommended the adoption of the rules and regulations of the National Medical Association for the government of the association. The report was adopted without a dissenting voice, and the following gentlemen were elected officers of the association:

President—Joseph W. Thompson, Paducah, Kentucky.

Vice-Presidents—W. A. Smith, of Illinois; J. H. Letcher, of Kentucky; J. B. Armstrong, of Indiana.

Recording Secretary—Geo. W. Burton, Mitchell, Indiana.

Corresponding Secretary—F. W. Beard, Vincennes, Indiana.

Assistants—E. H. Luckett, of Kentucky; T. N. Rafferty, of Illinois.

Treasurer—A. Patton, Vincennes, Indiana.

The name adopted for the new organization, is "The Indiana, Illinois, and Kentucky Tri-State Medical Association," and will meet at Vincennes on the last Tuesday of October, 1876, at 7½ o'clock P. M.

The Committee on Programme for next meeting is Drs. Letcher, Beard, Gray, Read, and Luckett.

Correspondence.

KANKAKEE, ILL., November 9, 1875.

EDITOR OF LANCET AND OBSERVER:—I can not refrain from expressing my opinion in regard to Art. 3, Nov. L. & O., "Strange case of death." If there is anything certain in medicine, from the case stated it is, that Minnie S. B. came to her death from an excessive use of quinine, and a neglect to apply such remedial agencies as are placed in our hands for the treatment of rigidity of the os uteri and inertia of the womb. First, if the directions were fully carried out, there must have been given thirty-five grains of quinine in the short space of six hours, which, if not sufficient to cause death, is certainly enough to cause grave apprehension in most any case under similar circumstances, much more in this "delicate" one, where there is no malarial affection, nor in fact any disease, the patient being in a normal condition, except rigidity of the os uteri and supposed inertia of the womb, as there "were no labor pains."

It remains, therefore, that "seven grains of quinine every two hours through the day," is the proper treatment for this case and other similar ones. If this be so, then the result of this one case certainly does not justify the truth of the assertion. The treatment for rigidity of the os uteri and inertia of the womb need not be taken up here, as E. E. Riopel, A.M., M.D., can look that up at his leisure, by referring to any text-book on the subject. There is one more point which he lays great stress on, and that is the introduction of the hand within the womb, by which operation he thinks he has learned so much, and wishes to "*caution*" others against the *hazardous operation*. The reply to this "*solemn warn-*

ing" is, that the introduction of the hand in the case stated *was not the cause of death*. The cause of death was, without doubt, cerebral congestion, caused by an excessive use of quinine, and the neglect to use such remedial agents for the treatment of the case as are now in general use.

C. A. WARNER, M. D.

OXFORD, IND., October 31, 1875.

EDITOR OF LANCET AND OBSERVER:—An article in November No. reminds me of an incident occurring in my practice one or two years ago, which may be worth making a note of in connection with *tania solium*. Was called in great haste to see a child (aged 11 months) of A. Johnson. It was reported cholera morbus. On arrival found that, in the interim and after the messenger left, Dr. Purdy had been called in, and that the child was better. This settled the matter with me, as the treatment was all that could be desired. I however thought to examine the diapers taken from the child. There was an unusual amount of mucus, and while pulling over this mucus I found an unusual tenacity to a part of it, which induced me to examine it still closer, when I found about eighteen inches of a *tænia solium*, at its widest part about one line in width, and terminating in a very sharp point. Now for the history. The child had a looseness of the bowels, about which there was nothing peculiar. The mother consulted one of her neighbors about it, and was advised to give her babe a *teaspoonful of powdered resin in a little molasses every three or four hours, to check the diarrhea*. It took two such doses, when the vomiting and tenesmus that followed alarmed the parents, and they sought medical assistance with the above results.

The child, before and since, has given no particular signs of entozoa.

S. B. ROBERTS, M. D.

MEDICAL COLLEGE OF OHIO, CINCINNATI, October 30, 1875.

J. C. CULBERTSON—*Sir*: In your issue for November, 1875, appears a slanderous communication entitled "Gratis Diplomas," purporting to be written by Dr. J. A. Kimmel, of Findlay, Ohio, and referring to the Medical College of Ohio. In your "editorial" department, under the head of "Can such things be?" you refer to this communication, and remark that, "If there is a belief in the minds of members of the profession away from here, that degrees are granted in the loose manner stated, and that belief is unfounded,

the faculty of the Ohio College should lose no time in correcting those opinions."

We beg to observe that if you had been actuated by the proper motives, you would have taken pains to ascertain the truth before publishing such a scurrilous article. The facts are as follows:

Dr. A. Hurd, of Findlay, Ohio, a graduate and practitioner of many years' standing, and at present President of the Northwestern Medical Association, received at our last commencement, as the annual announcement shows, the *ad eundem* degree of M.D. We do not grant this degree under any circumstances *in absentia*, and Dr. Hurd complied with the requirements, presented himself with the other candidates for the doctorate, and passed a very creditable written examination. We believe that no medical school in the United States requires more than this for an *ad eundem* degree.

The faculty have nothing to do with the personal difficulties of the physicians of the town of Findlay. We shall take care that Dr. Kimmel, in order to revenge himself on his neighbor, Dr. Hurd shall not slander with impunity the Medical College of Ohio.

Under these circumstances, you will, we doubt not, see the impropriety of becoming the medium of communicating Dr. Kimmel's slanders to the medical profession. I have therefore to demand, in the name and by the authority of the Medical College of Ohio, that you disavow in your next issue, and over your own signature, any sympathy with the charges contained in the article of Dr. Kimmel.

Very respectfully, your most obedient servant,

ROBERTS BARTHOLOW, M.D.,

Dean of the Faculty.

In answer to the above, we will state that the article entitled "Gratis Diplomas" was written by Dr. J. A. Kimmel, without instigation on our part, and was published under his signature, and for that reason we disclaim all responsibility for the author's representations, as we do for all communications signed by responsible physicians, and sent to this office for publication. We did not know of any personal difficulties of the physicians of the town of Findlay, nor do we now know of them beyond the statement in Dean Bartholow's letter. As to our comments on the article referred to, we have no retractions to make. No sympathy with them was expressed, as we had no friends to reward or foes to punish in the matter. The management of any public institution

is always open to fair criticism through the public press; and while the granting of diplomas is in the hands of the medical colleges—a passage through their doors being the only avenue of entrance to the medical profession—college faculties need not express surprise when informed that the whole body of the medical profession is both interested in, and are, so far as they are able, jealously watching their proceedings.

“Relative to the recent unpleasantness caused by the statements of Dr. Kimmel, of Findlay, the Northwestern Ohio Society arraigned Dr. Kimmel for unprofessional conduct. Dr. Kimmel acknowledged that the charges were without foundation, and promised to forward a statement to that effect to the CINCINNATI LANCET AND OBSERVER, and a copy to the Medical College of Ohio, to use as it saw fit.”—*The Clinic*, November 20, 1875.

At this date, which is three days after we usually close our pages to all communications for publication, we have received no such statement as referred to in *The Clinic*.

November 23.

Selections.

Method of disinfecting the wards of Bellevue Hospital, pursued by Prof. Doremus, and related by Fordyce Barker, M.D., in Medical Record.—The purification of the surgical wards in Bellevue Hospital was accomplished during the spring and summer of 1875, by the employment of large volumes of *chlorine* gas.

This powerful disinfectant was resorted to because all the poisonous emanations from the human system are decomposed by it, and thus rendered inert (carbonic acid gas excepted); also because of its diffusive power. Strips of paper were pasted over the crevices around the windows and doors, before generating the chlorine.

Two sheets of lead about eight feet long and four feet wide were turned up at their edges and placed on the floor of the ward to be treated.

In these leaden receptacles several hundred pounds of black oxide of manganese and common salt were placed, to which water was added until the mass, when thoroughly stirred with wooden shovels, had the consistency of a thick mud.

Bowls, basins, and pitchers of sulphuric acid were placed around the leaden vessels in readiness to be applied to the black mixture. To eliminate all the chlorine, the acid should equal the weight of the salt and manganese combined. Water was then poured over the floor to dampen the wood, and the ward was filled with steam until the moisture condensed on the ceiling and walls. The air of the room was so saturated with partly condensed vapor that we had to grope our way toward the vessels containing the sulphuric acid.

The several assistants then held said vessels over the mixture of manganese and salt, and at a signal all poured out the acid at the same time; then hastened to the second leaden trough, applied the acid and rushed out of the door to escape inhaling the chlorine gas which was liberated in immense volumes. Since the amount of poisonous gas was so great that it would have proved fatal to any one entering the apartment, the doors were securely fastened to guard against such an accident.

After the lapse of twenty-four hours, the vessels were again filled with sulphuric acid and placed around the leaden pans. The mixture was then rapidly stirred, and the second application of acid made as in the first instance.

For these two treatments about a carboy of sulphuric acid (160 lbs.) was employed.

After a second twenty-four hours' exposure of the ward to this gas, the windows were thrown open, the residuum of sulphate of manganese and sulphate of soda was removed, with the leaden and other vessels, and the walls and floor scrubbed and dried.

The chlorine was generated by this method, rather than by the addition of hydrochloric acid and manganese, not only because it is cheaper, but because the heat generated by mixing sulphuric acid and water rarefies the gas and facilitates its dissemination through the room and its passage into the porous walls.

Chlorine is comparatively inefficient unless moisture is present, hence steam was employed as described.

After one ward had been thus disinfected and ventilated, the same large leaden vessels were taken to an adjoining ward and the process repeated.

Especial stress is laid on the importance of generating enormous volumes of the chlorine gas, that it may thoroughly permeate the walls. As its odor is very pronounced, persons are liable to err in regard to the quantity, and they merely produce a bad smell and

signally fail to destroy the virus with which old or even new walls are at times impregnated.

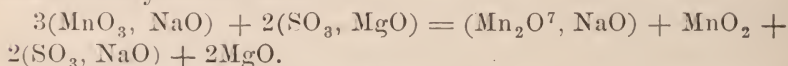
The *water-closets* were purified by the use of *ozone*.

This active form of oxygen was generated by mixing equal weights of manganate of soda and sulphate of magnesia in a dry state, and sprinkling this mixture in and around the basins at night, so that it might remain for a longer period than if applied in the daytime.

When brought in contact with water, *permanganate* of soda is produced, which decomposes in contact with the impurities of the sink, and evolves ozone, by which agent the disgusting and poisonous substances are decomposed, deodorized, and rendered harmless.

This treatment was repeated to secure purification.

As this is a cheap method for producing a *permanganate*, the reaction may be of interest.



Three equivalents of manganate of soda, and two of sulphate of magnesia, produce one equivalent of permanganate of soda, one of binoxide of manganese, two of sulphate of soda, and two of magnesia.

One hundred pounds of manganate of soda, and the same weight of sulphate of magnesia, were employed. For generating the chlorine in the different wards over five thousand pounds of the black oxide of manganese, twenty-five sacks of salt, and the equivalent of sulphuric acid were used.

Since this disinfection of the hospital, I am informed by members of the house staff that there has been but one case of pyæmia or other septic disease in the hospital, and this was a very doubtful one. By the methods adopted by Professor Doremus, or some other method improved by the progress of chemical science, who can doubt that in the future we shall find hospitals as securely freed from nosocomial malaria as we are now protected from small-pox by vaccination.

Ganglion of the Wrist.—The young lady now presented has a bursal or thecal tumor, sometimes called a ganglion, on the back of the left wrist. This has been caused by a deposit of inflammatory new material; a blow, or some like cause, has excited some slight inflammation, in consequence of which the sheath, becoming adherent to its tendon, has formed a pouch, or bag, in which the natural secretion accumulated. The fluid contained is thick and jelly-like,

similar to the gum that exudes from a cherry-tree. Possibly, now and then, the affection may exist as a congenital defect, but it generally occurs as I have described.

The treatment is simple. The older surgeons used to rupture this cyst, and disperse it into the cellular tissue by a blow with a weight, or a book ; the Bible was the favorite for the purpose, on account of a supposed special virtue in this direction. I will introduce a tenotome under the skin, some distance from the tumor, scarify it and liberate its contents ; the sac will subsequently be obliterated by inflammation, encouraged by painting the skin over it with iodine, and applying pressure ; an old-fashioned cent, or a silver quarter, makes a good compress. The dressing will remain on for three or four days, and then be temporarily removed to make a fresh application of tincture of iodine. If I were not a modest man I might claim originality for this method of treatment, as I have never seen it described anywhere ; it is not in any of the books, and I have used it with great success for many years.—*Prof. Gross' Clinic, in Med. and Surg. Reporter.*

Extract of Ergot.—The attention of physicians is invited to the extract of ergot for hypodermic injection, prepared by Hance Bros. & White, manufacturing pharmacutists and chemists, Philadelphia. One grain of the extract is equivalent to eight grains of ergot. It is freely soluble in distilled water, and may be administered hypodermically in the proportion of one grain to four minims of water.

Reviews and Notices.

A Practical Treatise on Diseases of the Eye. By ROBERT BRUDEWELL CARTER, F.R.C.S., Ophthalmic Surgeon to St. George's Hospital, etc. London: Macmillan & Co., 1875.

Mr. Carter has given us the latest contribution to ophthalmic literature in the shape of a handsome volume of 591 pages. It is in Macmillan & Co.'s best style, and is printed in clear type, on heavy tinted paper. It professes to embody the substance of his lectures at St. George's Hospital. He aims to present to the profession "in a concise and readable form a general view of the present state of

knowledge with regard to the nature and treatment of the more important diseases of the eye."

It is written in an easy-flowing, lecture-room style, and therefore lacks that concise, sharply defined book style which characterizes Stellwag's work. He divides the book into fifteen chapters, and in them treats of the principal diseases of the eye. He illustrates the different subjects by typical and instructive cases—a plan which we like, as it makes them better understood by the student and practitioner, for whom the book is intended. His treatment of eye diseases in general is judicious, and can safely be followed. He very properly devotes a good deal of space to the important subject of sympathetic ophthalmia, and lays down the law in plain and unmistakable language. If the dangers of this disease were better known to practitioners, there would be much suffering alleviated and blindness prevented.

We must beg to differ with the author on what he says in relation to retinitis in general, and to retinitis pigmentosa in particular.

He says: "Among the varieties of retinal change which have been described as this or that form of 'retinitis,' the leucomic, the syphilitic, the albuminuric, and the pigmentary, none but the last mentioned appears to me to be properly an inflammation, the others being the results of degeneration or infiltration of various kinds, perhaps sometimes complicated by inflammation of a secondary character." He goes on to speak of the slow development of the disease, and quotes Professor Donders as saying that there may be a period of *twenty* years or more between the first appearance of the symptoms and the final extinction of sight.

Certainly the slowness in its development would alone exclude it from the inflammations, and it is now generally described as pigment degeneration of the retina.

In its origin, progress, and development, it lacks the essential characteristics of an inflammation, and is acknowledged to be one of the obscure pages in ophthalmology. Mr. Carter himself does not treat it as an inflammation, and in fact there is no known treatment for it.

Further on he says: "I have little or no belief in the various forms of 'retinitis' described by writers; the albuminuric, the syphilitic, the leucomic, the apoplectic, and what not; but look upon them all as being essentially the same process, springing out of conditions which, if not identical, are very closely analogous to

one another." A few lines below he says: "The inflammatory process, in every case, adds swelling, turbidity, and effusion to the pre-existing changes." "When the inflammation is severe," etc. "The treatment of the inflammation resolves itself," etc.

He can not speak of those retinal changes, which he excludes from the category of true inflammation, without contradicting his first assertion. He may call those changes "inflammation of a secondary character," but they are nevertheless evidences of true inflammation, and are so described by the author himself. As for "retinitis pigmentosa," or more correctly pigment degeneration of the retina, it lacks all the characteristics of inflammation, and is not generally classified as such.

He hurries over the diseases of the fundus oculi in a very unsatisfactory manner, and devotes an incredibly short space to the important disease of retinitis albuminuria and syphilitica.

We are surprised at his conclusions and advice in relation to obstructions of the nasal duct. He must have been much less successful than most specialists are. Constantly wearing a style for a few weeks or months, or the practice of Bowman's or Stillwag's methods, have been successful in curing or greatly alleviating a large percentage of cases. We do not like his plan of slitting up the lower canalicular, as it is much easier to introduce a probe through the upper one. His assertion that "pterygium is scarcely at all amenable to treatment," will not, we think, coincide with results which most surgeons have obtained. The ordinary plastic operation made by drawing the healthy conjunctiva over the scleral surface laid bare by the removal of the pterygium is almost invariably successful.

The chapter on glaucoma, although short, is very satisfactory.

While we are a little disappointed in the book, yet we must say it contains much that is good and reliable. We may overlook some of its defects as it is intended to represent the results of his *individual* experience, and does not claim to set forth the practice of other ophthalmologists.

Lectures on the Nervous System. By JEROME K. BAUDUY, M.D., Professor of Psychological Medicine and Diseases of the Nervous System, and of Medical Jurisprudence, Missouri Medical College. Philadelphia: J. B. Lippincott & Co., 1875. Robert Clarke & Co., Cincinnati. Price \$4.00.

This work is an excellent compilation of the best authorities on the subject. There is nothing new, therefore, to observe in its

pages. The author gives his own selection of remedies in the treatment of the various affections delineated in the work. We are glad to note that he has not disfigured his narratives with pompous statements of the number of cases of this and that which he has treated within a short time.

We can heartily commend Dr. Bauduy's work as containing about everything that can be said on diseases of the nervous system up to this time, and arranged in a clear and graceful style; and we will add that it should have a wide circulation.

A Practical Treatise on Fractures and Dislocations. By FRANK HASTINGS HAMILTON, A.M., M.D., LL.D., Surgeon to Bellevue Hospital, etc. Fifth edition, revised and improved. Illustrated with three hundred and forty-four wood-cuts. Philadelphia: Henry C. Lea. For sale by Robert Clarke & Co.

It is sixteen years since the first edition of this work was presented to the medical profession. It at once received the hearty approbation of the medical profession, and no medical or surgical library was considered anything like complete without a copy of this work. The number of editions since issued attest its continued popularity with the profession. With the most commendable purpose in view, the author declared at the first issue of the book his intention to present in the most faithful and conscientious manner, precisely how much, with the knowledge and appliances at our command, we were able to accomplish, believing that every false and loose statement made retards our progress, or renders our steps hesitating and unequal. Since the first edition was issued, very many changes have occurred in the methods of treating fractures and dislocations, nearly all of which have been real improvements, and are concisely given in this last edition. The publisher issues it in the best style; in fact, it is an honest book, filled with matter, and not composed of a half or two-thirds margin and spaces.

A Treatise on Human Physiology: Designed for the Use of Students and Practitioners of Medicine. By JOHN C. DALTON, M.D., Professor of Physiology and Hygiene, in the College of Physicians and Surgeons, New York, etc. Sixth edition, revised and enlarged, with three hundred and sixteen illustrations. Philadelphia: Henry C. Lea, publisher. For sale by Robert Clarke & Co.

There has been no text-book offered to medical students that has met with a more favorable and universal reception than Dalton's

Physiology; in fact, it is the text-book used in every medical college, regular and irregular, in this country, and by teachers, pronounced the best on that subject. No work could receive a higher commendation.

This edition embraces the important advances made in our knowledge of the physiology of the nervous system within the past few years. The plan of arrangement adopted by the author is unchanged from that used in previous editions. Many of the illustrations are an improvement on those formerly used. There is not less than fifty per cent. more matter in this than in the last edition of the work. So far as the publishers are concerned, the book is an honest one.

Transactions of the Medical Society of the State of Pennsylvania, at its Twenty-sixth Annual Session, held in June, 1875. Vol. X., Pt. II.

This volume of Transactions not only contains a number of really valuable papers, but also systematically arranged reports from a number of the county societies, that from the Philadelphia county society being especially full and complete, embracing mortuary statistics and meteorological tables. The large membership of the society attests its popularity with the profession throughout the State.

Transactions of the Medical Society of the State of West Virginia.

These Transactions contain a number of really valuable papers, notably the following: By Dr. S. L. Jepson, of Wheeling, on "The Epidemics of Wheeling,"—a paper that has required a great deal of labor in its preparation, and will be valuable for all time for reference. A paper on "Forceps in Midwifery," by Dr. W. H. Sharp, of Volcano, is an excellent summary of the views of the most eminent obstetricians, with his own conclusions on the subject. A lengthy paper, giving the clinical history of a number of cases of malignant disease, by Dr. John Frissell, of Wheeling, is full of interest.

Transactions of the Medical and Chirurgical Faculty of Maryland, Seventy-ninth Annual Session.

The annual oration, delivered by Joseph M. Toner, M.D., on the medical history and physical geography of Maryland, is a most interesting and scholarly address. Brief reference is made to the early practitioners of the State, giving the notable events in their

lives. A number of topographical maps of the State, prepared with great care, are included in the address, with full statements of the various elevations, valleys, water-courses, and character of the soil.

The report on surgery, by Dr. T. R. Brown, is brief; while that on obstetrics and gynecology, by Dr. W. T. Howard, is very full and complete—the illustrations, however, are exceedingly shabby, and unworthy a place in a volume like this.

The reports of the other sections are good summaries of the recent progress of medical science. “The paper on the contagium-particles of the eruptive contagious fevers, their nature, and mode of action,” by J. E. Atkinson, evinces great research and study on the part of the author.

Lectures on Syphilis, and on some Forms of Local Disease, etc. By HENRY LEE, Professor of Surgery at the Royal College of Surgeons of England, etc.

The author announces in his preface, that “the principal object of the present work is to illustrate some of Hunter’s doctrines, which the lapse of time and the dissemination of more recent views have obscured or caused to be forgotten.” This book, of 244 pages, treats of the following subjects: Life of the blood, and blood inoculation; local and constitutional manifestations of syphilis; inoculation of urethral and vaginal discharges; treatment of syphilis, and of particular and modified syphilitic affections; local suppurating venereal sore; syphilization, lymphatic and physiological absorption; twofold inoculation; the different kinds of urethral discharges; prostatic discharges; warts and excrescences. The above subjects are divided into ten lectures. Mr. Lee’s work is not by any means a treatise on syphilis. It only touches on certain of the more important points, and leaves others unnoticed. As far as he expresses himself, the author is in agreement with the great majority of modern syphilographers, holding to the doctrines of a duality of poisons, the inoculability of secondary manifestations, etc.

Though he does not, in this work, discuss many of the most interesting points in this very interesting subject, he does describe certain manifestations and conditions not generally found in other treatises on the venereal diseases—such, for instance, as stricture of the urethra depending on constitutional causes; hæmorrhoids originating in syphilitic disease of the mucous membrane; the

occurrence of constitutional symptoms following an urethral discharge, there being an absence of any form of sore. Auto-inoculability he no longer regards as peculiar to the soft or "local suppurating sore;" but, at an early period, may occur with the infecting variety. While this book contains a good deal that is interesting, and while the views of its eminent author are to be taken as authoritative in this department of pathology, we yet can not help expressing a slight shade of disappointment both with the matter and style. K.

A Treatise on Therapeutics, comprising Materia Medica and Toxicology, with especial reference to the Application of the Physiological Action of Drugs to Clinical Medicines. By H. C. Woon, JR., M.D., Professor of Botany and Clinical Professor of Diseases of the Nervous System, in the Medical Department of the University of Pennsylvania. Second edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co. For sale by Robert Clarke & Co.

It is but a little more than a year since the first edition of this work was placed in the hands of the profession. Its popularity is attested by the fact that a second edition was so soon required to satisfy the demand for the work. Its value is shown by the liberal use made of the work by writers for the various journals during the past year. The plan of the author is excellent. His experiments with various drugs, to determine their action in health and disease, are valuable. It is just the kind of book that should be placed in the hands of an intelligent medical student, as it can not but act as a stimulus to observe, think, and work out results for himself. For the physician, as a work of reference, the book is exceedingly valuable.

The Student's Guide to Human Osteology. By W. W. WAGSTAFFE, B.A., F.R.C.S., Assistant Surgeon to and Lecturer on Anatomy, at St. Thomas Hospital. Philadelphia: Lindsay & Blakiston. For sale by Robert Clarke & Co. Price, \$3.50.

If there is one subject that is more particularly dry and up-hill work to the average medical student than another, it is the study of the bones, nor is there any one subject of more importance to him after becoming a practitioner than a thorough knowledge of human osteology. Without this essential information, he can not intelligently treat the simplest case of fracture, and any means that will make a study of osteology interesting, should be regarded

as a real benefactor. In an effort in this direction our author is certainly very successful. In size the work is a hand-book; but every bone in the body is most beautifully illustrated with plates, many of them colored. The description of each bone, its relations, attachments, and functions is terse, sufficient, and without a useless display of words.

A Series of American Clinical Lectures. Edited by E. C. SEGUIN, M.D. Vol. I., No. 7. Capillary Bronchitis of Adults, by CALVIN ELLIS, M.D., Jackson Professor of Clinical Medicine in Harvard University. New York: G. P. Putnam & Co.

That this series of lectures will do good, apart from the intrinsic value of each, we think can not admit of doubt. They will present to the profession articles carefully prepared and well studied, something that can be trusted. We would recommend every practitioner to subscribe for the series. T. M. S.

A sunny-faced little visitor, the *Golden Hours*, for December, has reached our office, and we welcome it most gladly. While many magazines have succumbed to hard times, *Golden Hours* has thrived and steadily held its own. It is the cheapest juvenile magazine in the United States, and the quality of its reading-matter is not surpassed by the higher-priced publications. A noticeable feature in its contents is the strong influence which the articles bear for all that is good and pure and true. Such a magazine is needed in every household. The department of "Owldom" contains puzzles, anecdotes, and scraps of wisdom for the children, and many interesting little letters from the young folks. Hitchcock & Walden, publishers, Cincinnati, Ohio.

Transactions of the Minnesota State Medical Society, 1875, embraces a number of papers, with reports on medicine and surgery. The papers by Dr. A. W. Stinchfield, on the "Psychological Influences in Health and Disease," and by Dr. D. W. Hand, on "Syphilis," are especially valuable.

The West Virginia Medical Student, No. 1, Vol. I., is on our table. Its contents are of a high character. The typographical appearance is excellent.

Nervus. By J. H. POOLEY, M.D.

A pamphlet of twenty-three pages, in which the author gives the etiology of this affection, with the various practical methods of treatment.

THE LANCET AND OBSERVER for 1876, ninety-six pages of reading matter each month. One old and one new subscriber for \$6.00.



